

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants: ROBERT S. CRESWELL ET AL.  
For: DIVERTER VALVE  
Serial No.: 10/595,281 Examiner: John C. Fox  
Filed: November 22, 2006 Group Art Unit: 3753  
Atty. Docket: 70038-0068 Confirmation No.: 6682

CERTIFICATE OF MAILING/TRANSMISSION (37 CFR 1.8(a))	
I hereby certify that this correspondence is, on the date shown below, being:	
<input type="checkbox"/> deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to the Commissioner for Patents, Alexandria, VA 22313-1450.	<input checked="" type="checkbox"/> transmitted via EFS Web filing to the Patent and Trademark Office.
	<u>/Rebecca L. Shilt/</u>
	<b>Signature</b>
Date: <u>March 24, 2009</u>	<u>Rebecca L. Shilt</u>
	<i>(type or print name of person certifying)</i>

Commissioner for Patents  
Office of Patent Legal Administration  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Sir:

**REQUEST FOR RECONSIDERATION OF PATENT TERM ADJUSTMENT**  
**UNDER 35 U.S.C. § 154 AND 37 C.F.R. § 1.705(b)**

In accordance with 37 C.F.R. § 1.705(b), Applicants hereby request reconsideration of a determination of patent term adjustment under 35 U.S.C. § 154(b). This request for reconsideration is timely filed because it is filed after the date of mailing of the Notice of Allowance and before payment of the issue fee.

The Commissioner is authorized to charge deposit account 50-2003 the sum of \$200 for this request in accordance with 37 C.F.R. § 1.18(e). However, because Applicants believe that this request is necessitated because of an error on behalf of the U.S. Patent and Trademark Office

Serial No. 10/595,281  
Filed: November 22, 2006  
Page 2 of 3

Examiner: John C. Fox  
Group Art Unit: 3753

in making the adjustment to the patent term, Applicant should be refunded this fee if this request is granted.

#### **STATEMENT OF FACTS INVOLVED**

The correct patent term adjustment for this patent should be 147 days. The Notice of Allowance determined that the patent term adjustment is 0 days.

This application was filed on November 22, 2006, under the provisions of 35 U.S.C. §371(c) based on PCT Patent No. PCT/US2004/033436 filed October 8, 2004, and claiming the benefit of U.S. Serial No. 60/481,499, filed October 10, 2003. The U.S. Patent and Trademark Office accepted November 22, 2006 as the §371(c) filing date. See Exhibit A attached hereto.

The due date for mailing the first office action under 37 CFR §703(a)(1) was 14 months after the §371(c) filing date of November 22, 2006, which date was January 22, 2008.

The first Office Action in this application was mailed on July 17, 2008, 177 days after 14 month due date based on the §371(c) filing date of this application. A copy of the first Office Action is attached hereto as Exhibit B.

Applicants filed a timely Response to this Office Action on August 18, 2008; a copy of this Response is attached hereto as Exhibit C.

A second Office Action in this application was mailed September 10, 2008. A copy of the second Office Action is attached hereto as Exhibit D, for which a timely response was due December 10, 2008.

Applicants filed a Response to this Office Action on January 9, 2009, along with a one month extension of time; a copy of this Response is attached hereto as Exhibit E.

On March 18, 2009, a Notice of Allowance, a Determination of Patent Term Adjustment, and a Notice of Allowability were mailed to Applicants. A copy of these documents is attached hereto as Exhibit F. In the Determination of Patent Term Adjustment, the Patent and Trademark Office determined that the patent term adjustment was 0 days.

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Filed: November 22, 2006  
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Examiner: John C. Fox  
Group Art Unit: 3753

This Determination of Patent Term Adjustment is in error because any delay in issuance of the first Office Action was not the fault of the Applicants and was the fault of the U.S. Patent and Trademark Office. The total delay attributable to the U.S. Patent and Trademark Office is 177 days and the total delay attributable to Applicants is 30 days, a difference of 147 days calculated under 37 CFR §1.704(a). The correct Patent Term Adjustment should be 147 days.

Upon review of the file in Private PAIR, Applicants' attorney found in the Patent Term Adjustment History an entry dated July 18, 2007, with the notation "Dummy Standard Action – DO Not DELETE." This faulty and unknown entry may have led to the improper computation of the patent term adjustment of 0 days. A copy of this Patent Term Extension History, printed from Private PAIR on March 19, 2009, is attached as exhibit G.

In view of the foregoing, Applicants believe that they are entitled to the full 147 days of patent term adjustment and no deduction should be made because Applicants carried out their obligation to prosecute the application diligently within the law.

Restoration of patent term adjustment of 147 days is respectfully requested.

Respectfully submitted,

ROBERT S. CRESWELL ET AL.

Dated: March 24, 2009

By: /Joel E Bair/

Joel E. Bair, Reg. No. 33,356  
McGARRY BAIR PC  
32 Market Ave. SW, Suite 500  
Grand Rapids, Michigan 49503  
616-742-3500

G0449262.DOC

## EXHIBIT A



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
 United States Patent and Trademark Office  
 Address: COMMISSIONER FOR PATENTS  
 P.O. Box 1450  
 Alexandria, Virginia 22313-1450  
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APPL. NO.	FILING OR 371(c) DATE	ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLMS	IND CLMS
10/595,281	11/22/2006	3753	515	70038-0068	18	1

CONFIRMATION NO. 6682

20915  
 MCGARRY BAIR PC  
 32 Market Ave. SW  
 SUITE 500  
 GRAND RAPIDS, MI 49503

## FILING RECEIPT



\*OC000000024068273\*

Date Mailed: 05/29/2007

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please mail to the Commissioner for Patents P.O. Box 1450 Alexandria Va 22313-1450. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).**

## Applicant(s)

Robert S. Creswell, Grand Rapids, MI;  
 Michael Zolnierok, Grandville, MI;  
 Michael W. Regelbrugge, Rockford, MI;  
 Jimmie D. Chrysler, Wyoming, MI;

## Assignment For Published Patent Application

AMERIKAM, INC., Grand Rapids, MI

**Power of Attorney:** The patent practitioners associated with Customer Number **20915**.

## Domestic Priority data as claimed by applicant

This application is a 371 of PCT/US04/33436 10/08/2004  
 which claims benefit of 60/481,499 10/10/2003  
 and claims benefit of 60/481,890 01/13/2004 \*  
 (\*)Data provided by applicant is not consistent with PTO records.

## Foreign Applications

If Required, Foreign Filing License Granted: 05/24/2007

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US10/595,281**

Projected Publication Date: 08/30/2007

**Non-Publication Request:** No

**Early Publication Request:** No

**\*\* SMALL ENTITY \*\***

**Title**

DIVERTER VALVE

**Preliminary Class**

137

## **PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES**

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

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### **LICENSE FOR FOREIGN FILING UNDER Title 35, United States Code, Section 184 Title 37, Code of Federal Regulations, 5.11 & 5.15**

#### **GRANTED**

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING

LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

#### **NOT GRANTED**

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
 United States Patent and Trademark Office  
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 Alexandria, Virginia 22313-1450  
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U.S. APPLICATION NUMBER NO.	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
10/595,281	Robert S. Creswell	70038-0068

20915  
 MCGARRY BAIR PC  
 32 Market Ave. SW  
 SUITE 500  
 GRAND RAPIDS, MI 49503

INTERNATIONAL APPLICATION NO.

PCT/US04/33436

I.A. FILING DATE

PRIORITY DATE

CONFIRMATION NO. 6682

371 ACCEPTANCE LETTER



\*OC00000024068274\*

Date Mailed: 05/29/2007

**NOTICE OF ACCEPTANCE OF APPLICATION UNDER 35 U.S.C 371 AND 37 CFR 1.495**

The applicant is hereby advised that the United States Patent and Trademark Office in its capacity as a Designated / Elected Office (37 CFR 1.495), has determined that the above identified international application has met the requirements of 35 U.S.C. 371, and is ACCEPTED for national patentability examination in the United States Patent and Trademark Office.

The United States Application Number assigned to the application is shown above and the relevant dates are:

<u>11/22/2006</u>	<u>11/22/2006</u>
DATE OF RECEIPT OF 35 U.S.C. 371(c)(1), (c)(2) and (c)(4) REQUIREMENTS	DATE OF COMPLETION OF ALL 35 U.S.C. 371 REQUIREMENTS

A Filing Receipt (PTO-103X) will be issued for the present application in due course. **THE DATE APPEARING ON THE FILING RECEIPT AS THE " FILING DATE" IS THE DATE ON WHICH THE LAST OF THE 35 U.S.C. 371 (c)(1), (c)(2) and (c)(4) REQUIREMENTS HAS BEEN RECEIVED IN THE OFFICE. THIS DATE IS SHOWN ABOVE.** The filing date of the above identified application is the international filing date of the international application (Article 11(3) and 35 U.S.C. 363). Once the Filing Receipt has been received, send all correspondence to the Group Art Unit designated thereon.

The following items have been received:

- Indication of Small Entity Status
- Copy of the International Application filed on 04/04/2006
- Copy of the International Search Report filed on 04/04/2006
- Preliminary Amendments filed on 04/04/2006
- Information Disclosure Statements filed on 04/04/2006
- Oath or Declaration filed on 11/22/2006
- U.S. Basic National Fees filed on 04/04/2006
- Assignee Statement for PGPUB filed on 04/04/2006
- Priority Documents filed on 04/04/2006

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

---

JUNE D GREEN

Telephone: (703) 308-9290 EXT 180

**PART 1 - ATTORNEY/APPLICANT COPY**

FORM PCT/DO/EO/903 (371 Acceptance Notice)





# EXHIBIT B

## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
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Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,281	11/22/2006	Robert S. Creswell	70038-0068	6682
20915	7590	07/17/2008		
MCGARRY BAIR PC 32 Market Ave. SW SUITE 500 GRAND RAPIDS, MI 49503			EXAMINER FOX, JOHN C	
			ART UNIT 3753	PAPER NUMBER
			MAIL DATE 07/17/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/595,281	<b>Applicant(s)</b> CRESWELL ET AL.	
	<b>Examiner</b> John Fox	<b>Art Unit</b> 3753	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-18 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 April 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/4/06</u>  | 6) <input type="checkbox"/> Other: _____                          |

This action is responsive to the communication filed April 4, 2006.

The drawings and specification are objected to. On page 5, line 15, the inner end "70" is not shown in the drawings. On page 6, first full paragraph, both "an outlet face 102" and "the contact surface 102" are disclosed. Referring to disk 16, Figures 1, 5, and 6, page 6 recites "an elongated filter opening 110" but these drawings do not show such opening. Figures 5 and 6 show two elongated openings 108, 112, two through openings 104, 106, and the last through opening is unlabelled and undescribed. In Figure 13 "110" labels opening 108, in Figure 15 "108" labels 104, and in Figure 17 "104" labels 106 and "106" labels the undescribed opening. None of Figures 12, 14, and 16 label any of the relevant passages. It is virtually impossible to understand this part of the disclosure.

On page 6, line 28, it appears that it should read "mount 20 need not". On page 9, line 1 "an adapter 160" is mentioned but Figures 10, 11, 18, 21 show an adapter 162. This adapter 162 also conflicts with seal 162 of Figure 19. On page 11, first full paragraph, both "sealing rings 162, 164, and 166" and "grooves 162, 164, and 166" are mentioned. Notch 174 is not labeled in Figure 19. In Figure 4, "86" labels both 86 and 84.

While there is no specific requirement as to how much of the drawings need be labeled, additional labeling would help to understand the invention. Figures 13, 14, 16 have been mentioned. "108" in Figure 5 and "112" in Figure 6 would be helpful. In Figure 11, elements 60, 88, 90, 92, 94, 104, 106, 116, 118, 120, 122, and 128, all of which are important to an understanding of the invention, are visible but unlabeled.

The drawings are objected to for the reasons above. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The specification is objected to for the reasons above. Correction is required.

This application contains claims directed to the following patentably distinct species

Figures 1-17

Figures 18-20

Figures 21-23.

The species are independent or distinct because claims to the different species recite the mutually exclusive characteristics of such species. In addition, these species are not obvious variants of each other based on the current record.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, at least claims 1-3 appear to be generic.

There is an examination and search burden for these patentably distinct species due to their mutually exclusive characteristics. The species require a different field of search (e.g., searching different classes/subclasses or electronic resources, or employing different search queries); and/or the prior art applicable to one species would not likely be applicable to another species; and/or the species are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

**Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.**

The election of the species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the election of species requirement, the election shall be treated as an election without traverse. Traversal must be presented at

the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected species.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the species unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other species.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Fox whose telephone number is 571-272-4912. The examiner can normally be reached on Monday-Saturday from 10am-6pm (Hoteling Program).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on 571-272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John Fox/  
Primary Examiner  
Art Unit 3753

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		
	First Named Inventor	Robert S. Creswell	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	70038-0068	

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5701934		1997-12-30	Kuran et al.	
	2					

If you wish to add additional U.S. Patent citation information please click the Add button.

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Examiner Initial*	Cite No	Publication Number	Kind Code <sup>1</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					

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Examiner Initial*	Cite No	Foreign Document Number <sup>3</sup>	Country Code <sup>2</sup>	Kind Code <sup>4</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T <sup>5</sup>
	1	3720207	DE	A	1987-12-23	Industria Piemontese Radiatori Automobili S.p. A.		<input type="checkbox"/>
	2	1293712	EP	A	2003-09-10	Barbara Soldi		<input type="checkbox"/>

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. //J.F./



**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

Application Number		
Filing Date		
First Named Inventor	Robert S. Creswell	
Art Unit		
Examiner Name		
Attorney Docket Number	70038-0068	

	3	1342996	EP	A	2003-09-10	Techem Development GmbH		<input type="checkbox"/>
	4	0771980	EP	A	1997-05-07	Galatron S.r.l.		<input type="checkbox"/>
	5	1096189	EP	A	2001-05-02	NGK Spark Plug Co., Ltd.		<input type="checkbox"/>

If you wish to add additional Foreign Patent Document citation information please click the Add button

**NON-PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>5</sup>
	1		<input type="checkbox"/>

If you wish to add additional non-patent literature document citation information please click the Add button

**EXAMINER SIGNATURE**

Examiner Signature	/John Fox/	Date Considered	07/15/2008
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> See Kind Codes of USPTO Patent Documents at [www.USPTO.GOV](http://www.USPTO.GOV) or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>3</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>4</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here if English language translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /J.F./

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	3797449
<b>Application Number:</b>	10595281
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	6682
<b>Title of Invention:</b>	<div>EXHIBIT C</div> DIVERTER VALVE
<b>First Named Inventor/Applicant Name:</b>	Robert S. Creswell
<b>Customer Number:</b>	20915
<b>Filer:</b>	Joel Evan Bair
<b>Filer Authorized By:</b>	
<b>Attorney Docket Number:</b>	70038-0068
<b>Receipt Date:</b>	18-AUG-2008
<b>Filing Date:</b>	22-NOV-2006
<b>Time Stamp:</b>	16:12:20
<b>Application Type:</b>	U.S. National Stage under 35 USC 371

### Payment information:

Submitted with Payment	no
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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		G0396089.PDF	137971 fcfdc8585a59f6244f311958b663109b23fcdaf0	yes	6

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Response to Election / Restriction Filed	1	1
	Specification	2	4
	Drawings-only black and white line drawings	5	5
	Applicant Arguments/Remarks Made in an Amendment	6	6

**Warnings:**

**Information:**

2	Drawings-other than black and white line drawings	G0396068.PDF	276830	no	10
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**Warnings:**

**Information:**

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**New Applications Under 35 U.S.C. 111**

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

**National Stage of an International Application under 35 U.S.C. 371**

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

**New International Application Filed with the USPTO as a Receiving Office**

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants: ROBERT S. CRESWELL, MICHAEL ZOLNIEREK, MICHAEL W. REGELBRUGGE, AND  
JIMMIE D. CHRYSLER

For: DIVERTER VALVE

Examiner: John C. Fox

Serial No.: 10/595,281

Filed: April 4, 2006

Docket No.: 70038-0068

Group Art Unit: 3753

CERTIFICATE OF MAILING/TRANSMISSION (37 CFR 1.8(a))	
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	<u>/Rebecca L. Shilt/</u>
	<b>Signature</b>
Date: <u>August 18, 2008</u>	<u>Rebecca L. Shilt</u>
	<i>(type or print name of person certifying)</i>

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**RESPONSE TO RESTRICTION REQUIREMENT**

Sir:

This paper responds to the Non-final Office Action mailed July 17, 2008.

**Amendments to the Specification** begin on page 2 of this paper.

**Amendments to the Drawings** begin on page 5 of this paper.

**Remarks** begin on page 6 of this paper.

### **Amendments to the Specification**

Please amend the Specification by replacing the corresponding paragraphs with the following new paragraphs. Changes from the existing specification are shown in redline/strikeout form. Paragraph references are to the published application at US2007/0199599.

[0042] The opening 84 is positioned to be in registry with the termination point ~~76~~78, and the opening 86 is positioned to be in registry with the termination point ~~78~~76. Openings 88, 90 are positioned preferably along a diameter of the disk 14 to be within the flare portion 56 of the inlet conduit 54. Slots 92, 94 extend along the diameter of the disk 14 from the respective openings 88, 90 at the bearing face 82. The bearing face 82 comprises a smaller irregular contact surface 96 that might be formed by removing material from the bearing surface along its peripheral edges. The smaller contact surface 96 helps to reduce torque. As is conventional in ceramic disk valves, the contact surface 96 must be polished flat.

[0043] Referring now to Figs. 1, 5, and 6, the rotating ceramic disk 16 has a generally circular shape from which extend keys 98. The rotating ceramic disk 16 has a larger diameter than the fixed ceramic disk 14 and includes a bearing face 100 on one side and an outlet face 102 on the other side. The bearing face 100 has a smaller diameter contact surface 103 that is polished flat and is of a size no smaller than the contact surface 96 of the fixed disk 14. The rotating ceramic disk 16 has four pass through openings and a blind slot in the contact surface 103. Two center openings 104, 106 are disposed on a diameter of the disk 16 and are spaced from each other to be in registry with the openings 88, 90 in a first position of the rotating disk 16 relative to the fixed disk 14. A spray opening 108 is positioned to be in registry with one of the slots 92, 94 in the fixed disk 14 in a second position of the rotating disk 16 relative to the fixed disk 14, when simultaneously, the two center openings 104, 106 will not be in registry with the openings 88, 90. An elongated filter opening 110 is positioned near the perimeter 111 of the contact surface ~~102-103~~ to be in registry with opening 86 in the fixed disk 14 in a third position of the rotating disk 16 relative to the fixed disk 14. An elongated blind slot 112 is sized and positioned within the contact surface 103 to place the opening 84 into fluid communication with the slot 92 (both

on the fixed disk 14) at the same time that the elongated filter opening 110 is in registry with the opening 86.

[0044] Looking now at Figs. 1, 7 and 8, the accessory mount 20 is a disk preferably formed of metal, such as brass, or a suitable polymer, such as Polyoxymethylene, and has an adhering surface 113 and an opposite outlet surface 114. The accessory mount 20 need not be formed of the same material as the housing 12, although for economic or aesthetic reasons, it may be preferable to do so. The adhering surface 113 is adapted to be fixed to the outlet face 102 of the rotating ceramic disk 16. Preferably the accessory mount 20 is adhered to the outlet face 102 using any suitable adhesive that will fix the adhering surface 112 to the outlet face 102 permanently, and within a maximum temperature range to be found in the application to which the valve 10 is to be used. An example is an epoxy.

[0053] In the first position, water enters the inlet conduit 54 from the faucet where it passes through the flare portion 56 and into the pass through openings 88, 90 of the fixed disk 14. Opening ~~90-88~~ is blocked by the contact surface of the rotating ceramic disk 14, but opening ~~88~~ 90 is in fluid communication with the elongated blind slot 112 by way of the slot ~~92-94~~. Consequently, water flows through the blind slot 112 to the opening ~~84-86~~, which is in registry with the termination point 76. Water continues to flow through channel 68 to conduit 66, then to the filter inlet 60 and to the filtration unit (not shown). Water exiting the filtration unit enters the valve 10 through the filter outlet 62, then into the depending conduit 72, through channel 74 and to the termination point 78. Here, water flows through the termination point 78 which is in registry with opening ~~86-84~~, and which in turn by the position of the outlet assembly 26, is in registry with the elongated filter opening 110 of the rotating ceramic disk 16. Simultaneously, water passing through the elongated filter opening 110 enters the annular blind slot 122 of the accessory mount, there to exit the valve 10 through the filter outlet opening 128. Preferably, the flow of filtered water is laminated through the laminator 136.

[0054] Figs. 14 and 15 illustrate the relative positions of the components in the second position. In the second position, water enters the inlet conduit 54 from the faucet where it passes through the flare portion 56 and into the pass through openings 88, 90 of the fixed disk 14. Opening 88

90 is blocked by the contact surface of the rotating ceramic disk 14, but opening ~~90-88~~ is in fluid communication with the spray opening 108 by way of the slot ~~94~~92. Simultaneously, water is blocked from entry into the filter inlet 60 of the housing 12 and from entry into the center openings 104, 106 of the rotating disk 16. Water flows through the spray opening 108 and into the groove 118 in the accessory mount 20 where it exits in a spray through the spray openings 120.

[0055] Figs. 16 and 17 illustrate the relative positions of the components in the third position. In the third position, water enters the inlet conduit 54 from the faucet where it passes through the flare portion 56 and into the pass through openings 88, 90 of the fixed disk 14. Since the pass through openings 88, 90 are in registry with the two center openings 104 and 106, water passes through the rotating ceramic disk 16 and out through the center aperture 116 in the accessory mount 20, which is also in registry with the center openings 104 and 106. Preferably, this flow of unfiltered water is aerated through the aerator 132.

[0058] Looking now at Figs. 19 and 20, the sealing rings 162, 164, and 166 are disposed, respectively in grooves 168, 170, and 172 in the face 52' of the upper body portion 34'. The groove 168 is formed at the periphery of the flare portion 56; the groove 170 is formed at the periphery of the channel ~~68~~74; and the groove 172 is formed at the periphery of the channel ~~74~~66. Preferably, at least a portion of each groove 162, 164, and 166 is dovetailed (see Fig. 20) to provide additional space for the sealing rings to deform when they are compressed by the fixed disk 14' and by water pressure in the adjacent channel. For example, the groove along the sides of the channel might not be dovetailed but the groove at the ends of the channel may be dovetailed. In a preferred embodiment, the grooves 162, 164, and 166 are countersunk approximately .050 inches. Also, a notch 174 is formed in the upper body portion 34' to accommodate a tab (not shown) on the fixed disk 14' so that the fixed disk can be properly aligned relative to the housing 12' and fixed against rotation.

**Amendments to the Drawings**

Please amend the drawings by substituting replacement sheets 2, 3, and 5–12 for corresponding sheets in the application. Replacement sheets so marked are attached, as are annotated copies of the replacement sheets with the proposed changes marked in red.



## **Remarks**

### **Objections to the Specification and Drawings**

The informalities in the drawings and specification identified by the Examiner are noted with appreciation. Appropriate amendments to the specification and drawings have been made to clarify the issues raised by the Examiner.

It is to be noted that water flow in the first position takes the following path through respective passages: 54→56→90→94→112→86→60→62→84→110→122→128 and out. Water flow in the second position takes the following path: 54→56→88→92→108→118 and out. Water flow in the third position takes the following path: 54→56→88, 90→104, 106→116 and out.

### **Restriction Requirement**

In response to the Examiner's requirement for restriction, Applicants respectfully elect Figures 1–17 without traverse. Claims 1–9 and 14 are drawn to all embodiments. Claim 10 is drawn to the embodiment of the thrust bearing illustrated in Figs. 1–17. Claims 11 and 12 are drawn to the embodiment of the thrust bearing illustrated in Figs. 18–20. Claim 13 is drawn to the embodiment of the thrust bearing illustrated in Figs. 21–23. Claims 15–18 are drawn to the embodiments of the seals illustrated Figs. 18–23.

Any questions concerning the foregoing can be directed to the undersigned.

Respectfully submitted,

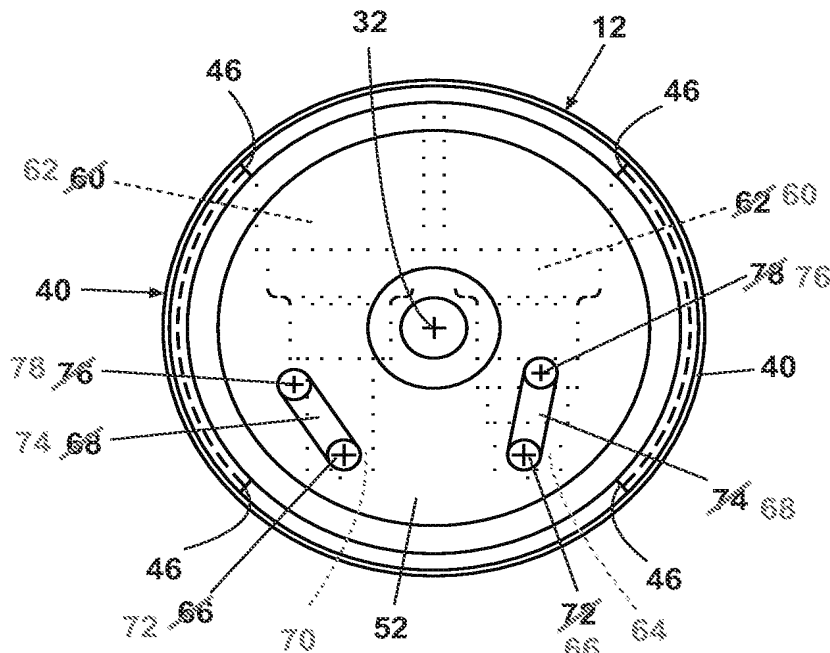
ROBERT S. CRESWELL ET AL.

Date: August 18, 2008

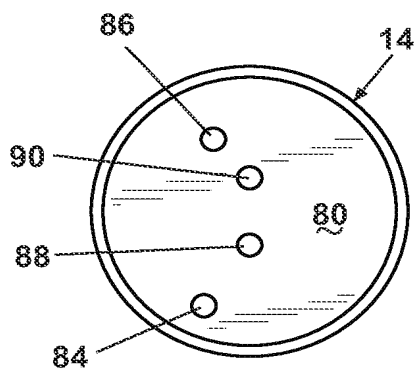
By: /Joel E Bair/

Joel E. Bair, Reg. No. 33,356  
McGARRY BAIR PC  
32 Market Ave. SW, Suite 500  
Grand Rapids, Michigan 49503  
616-742-3500  
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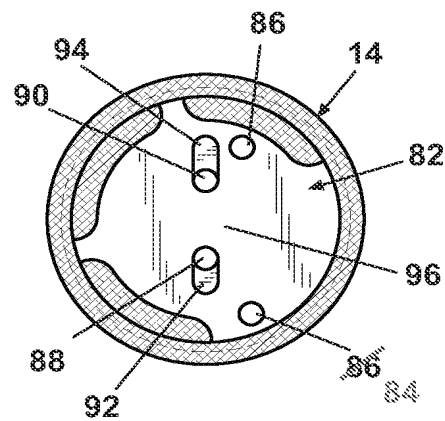
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**2/13**



**Fig. 2**

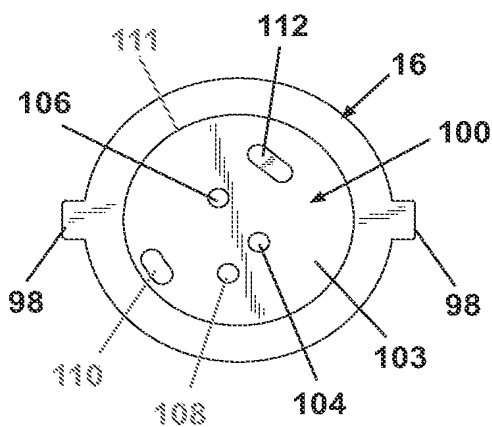


**Fig. 3**

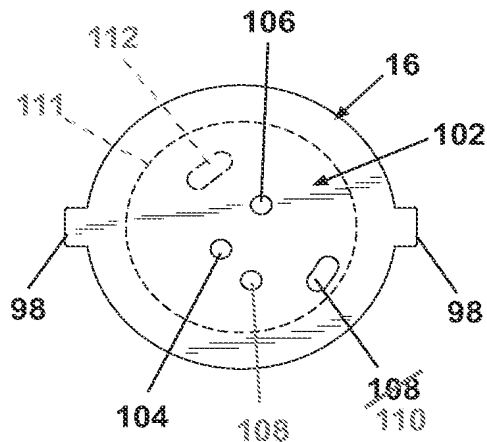


**Fig. 4**

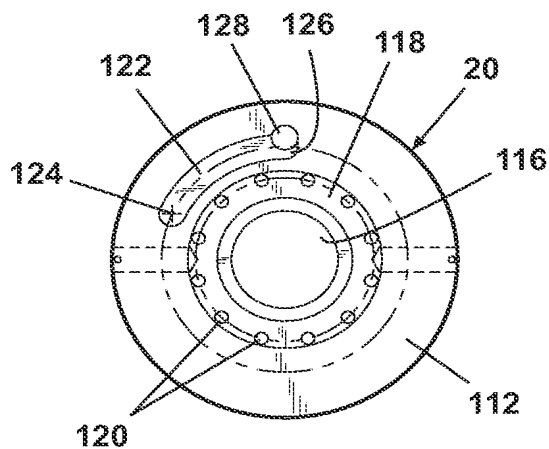
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**3/13**



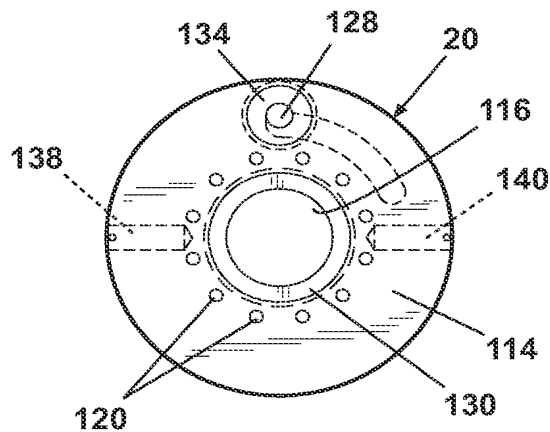
**Fig. 5**



**Fig. 6**

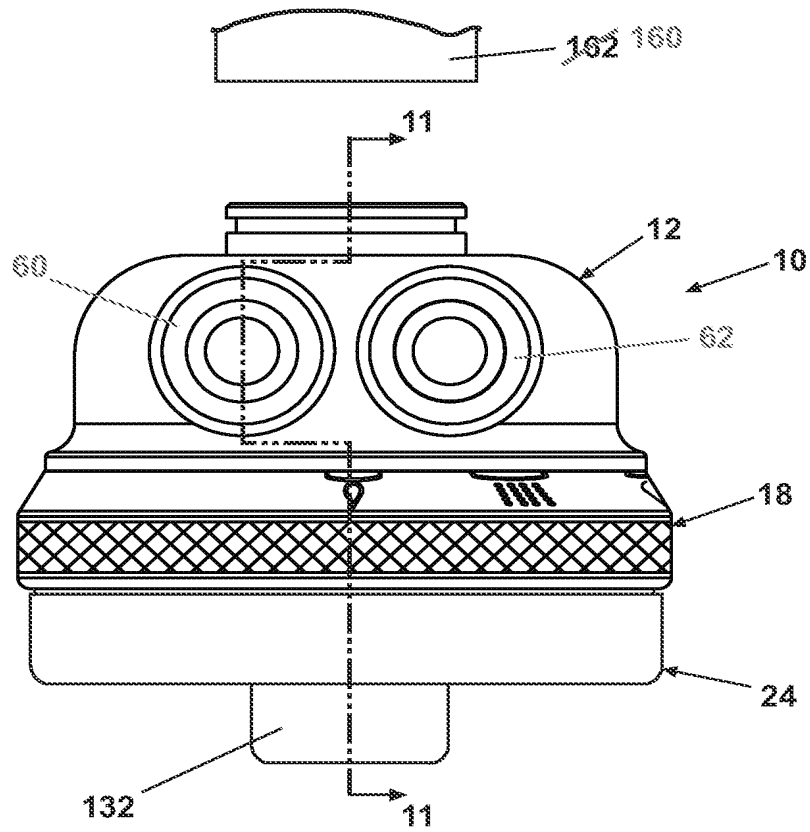


**Fig. 7**



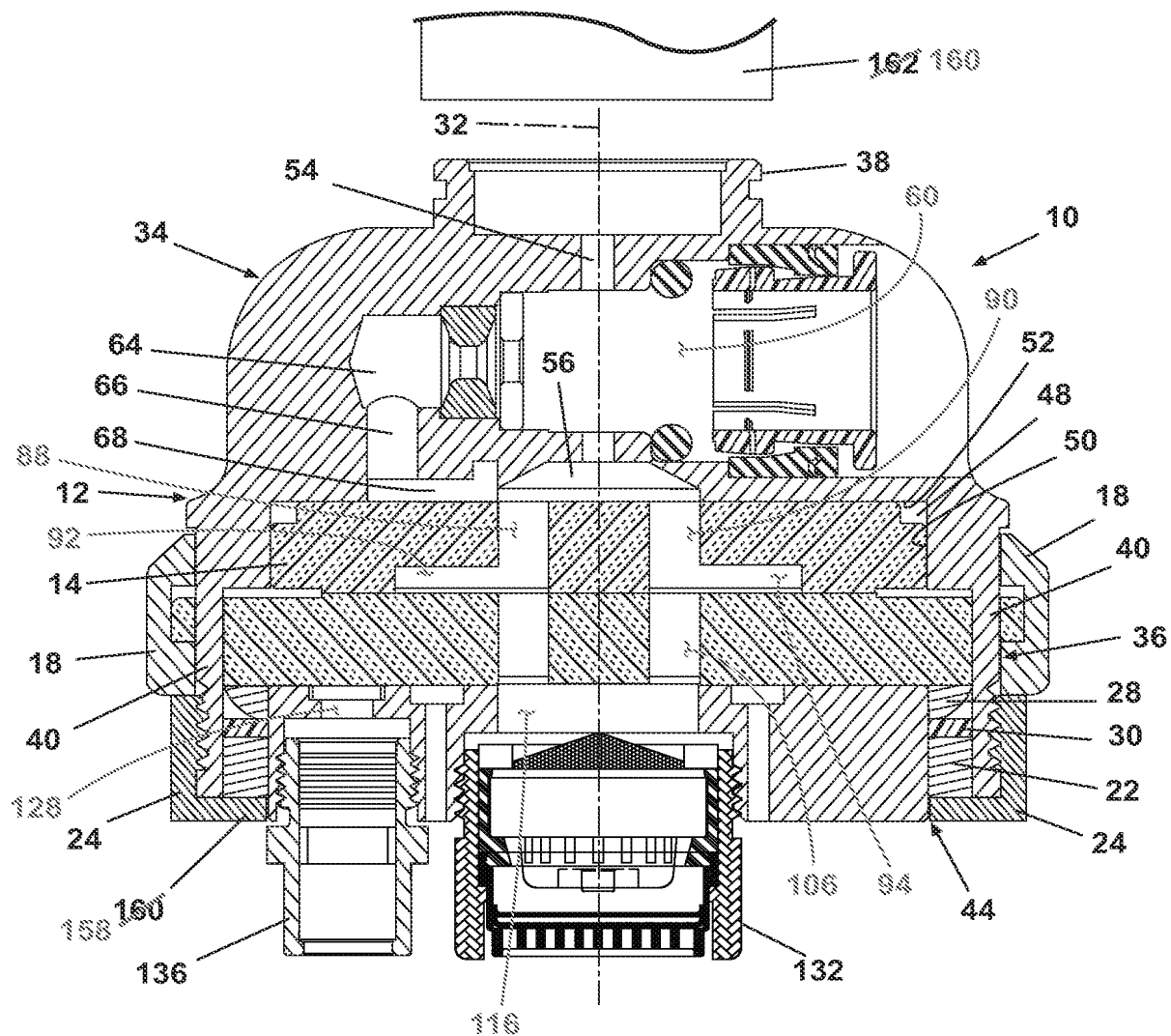
**Fig. 8**

Annotated Sheet  
**5/13**



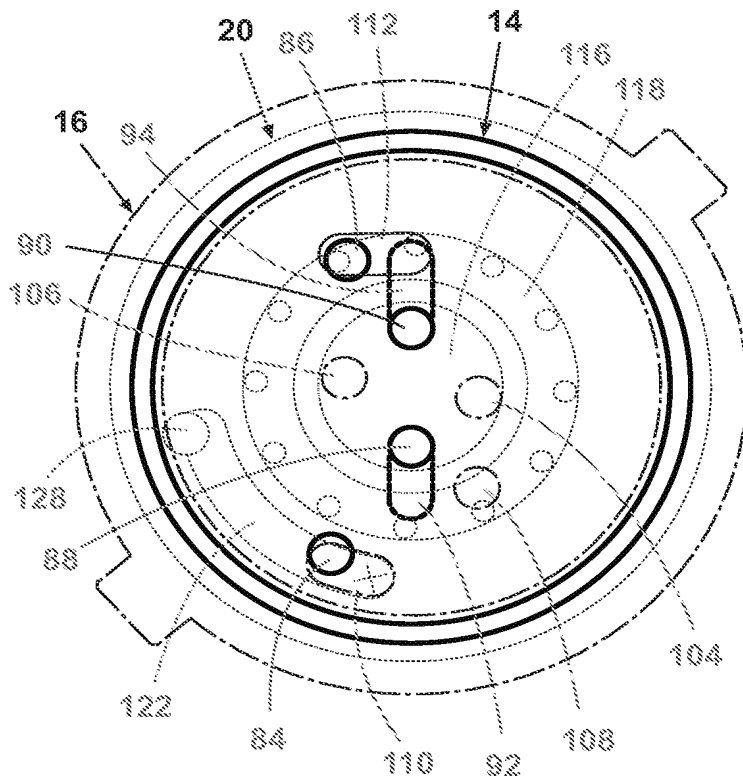
**Fig. 10**

Annotated Sheet  
**6/13**

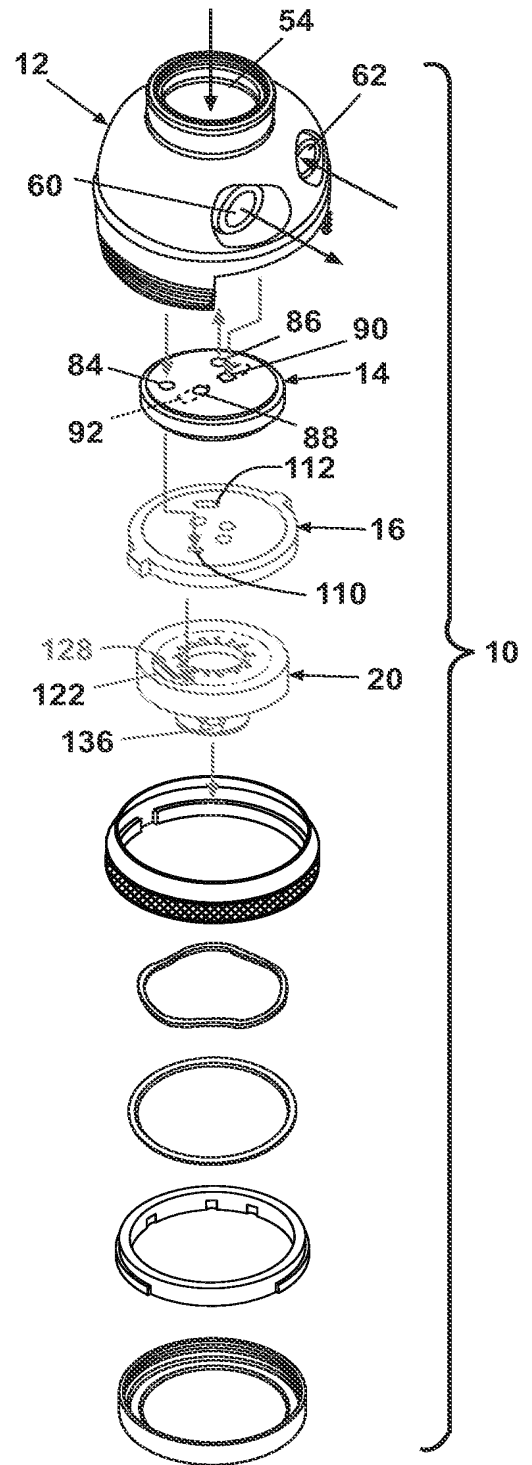


**Fig. 11**

Annotated Sheet  
**7/13**

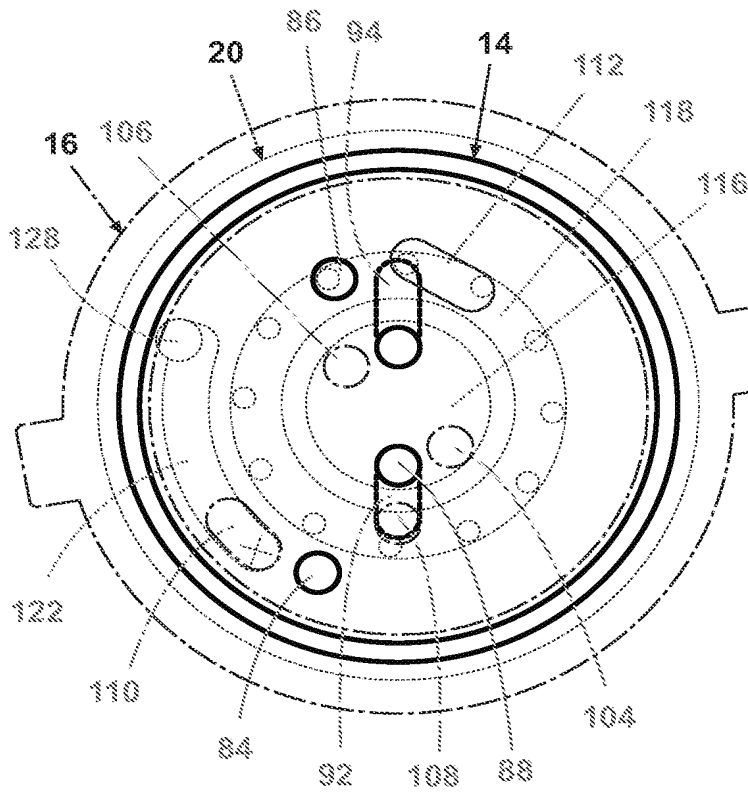


**Fig. 12**

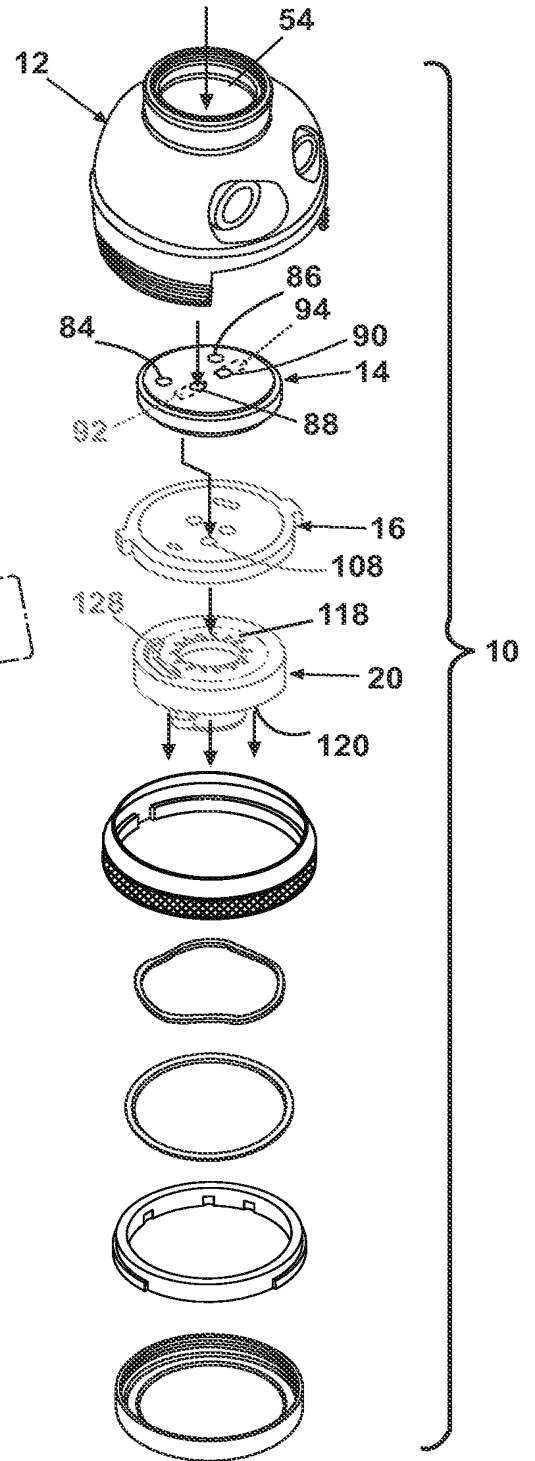


**Fig. 13**

Annotated Sheet  
**8/13**

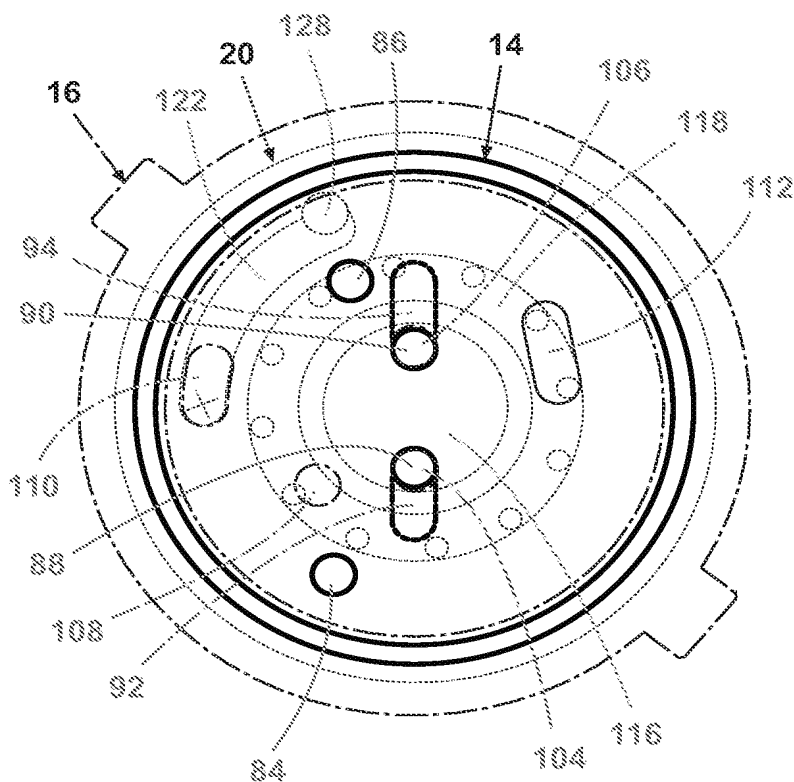


**Fig. 14**

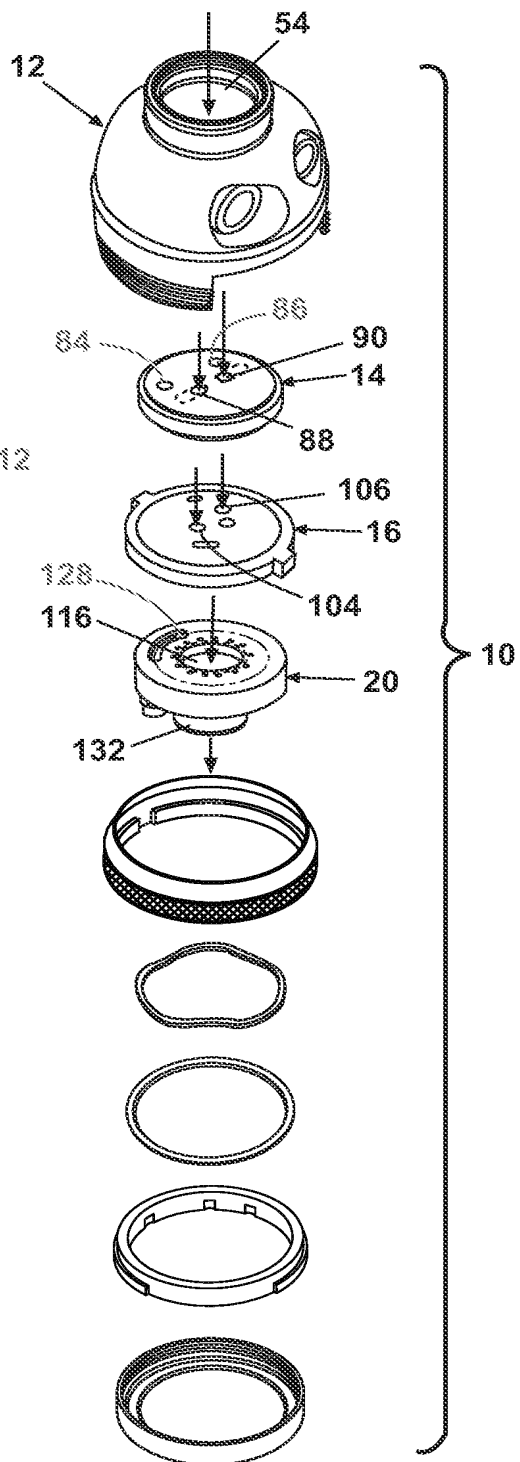


**Fig. 15**

Annotated Sheet  
**9/13**



**Fig. 16**

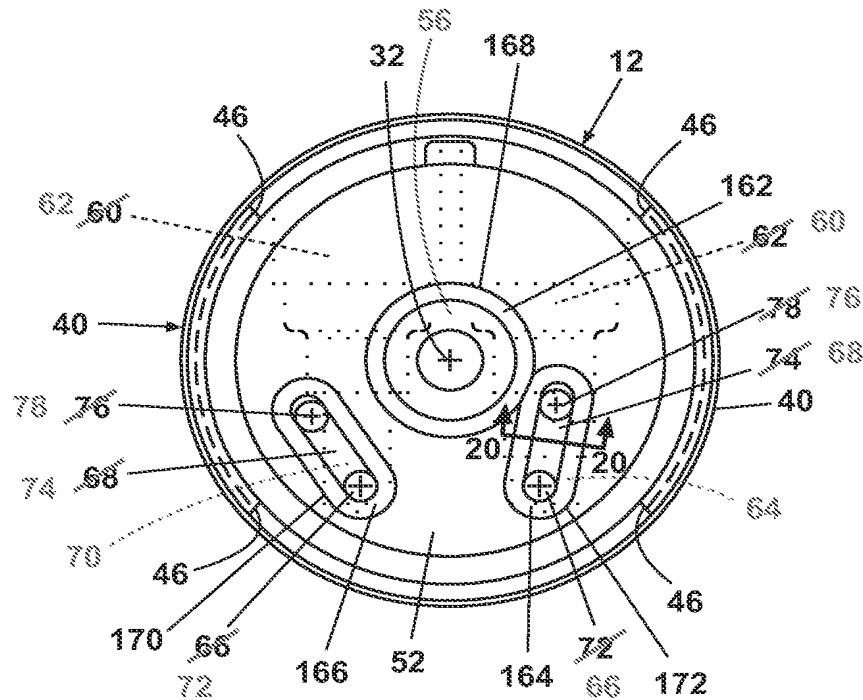


**Fig. 17**

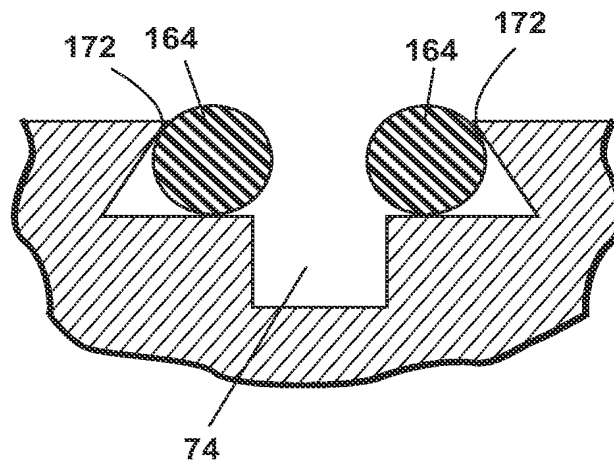


**Fig. 18**

Annotated Sheet  
**11/13**

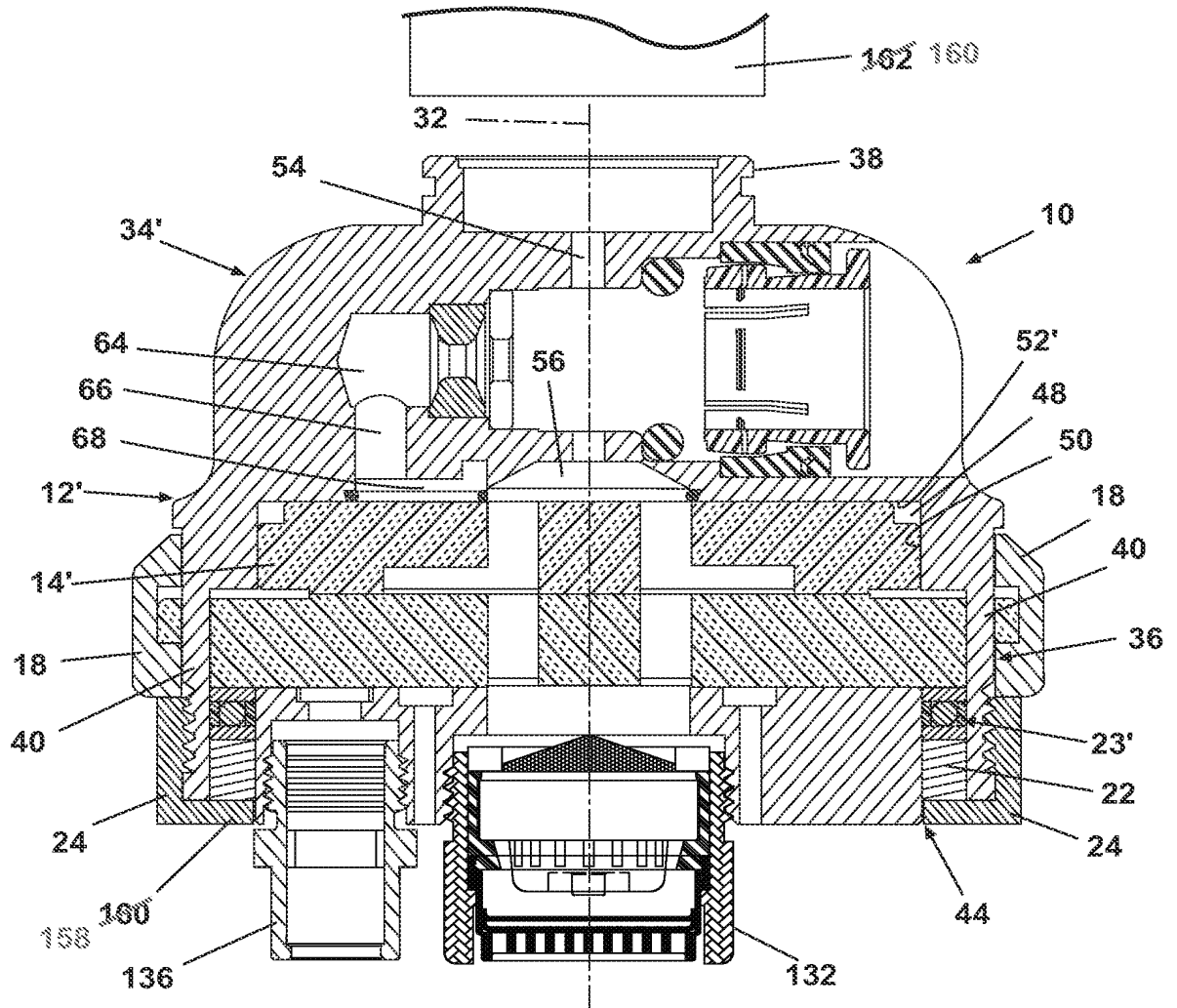


**Fig. 19**



**Fig. 20**

Annotated Sheet  
**12/13**



**Fig. 21**

Replacement Sheet

2/13

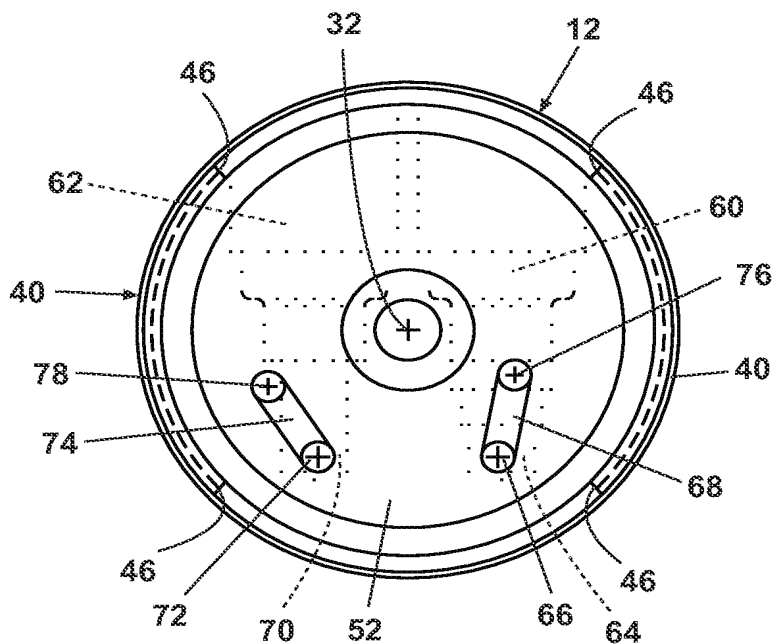


Fig. 2

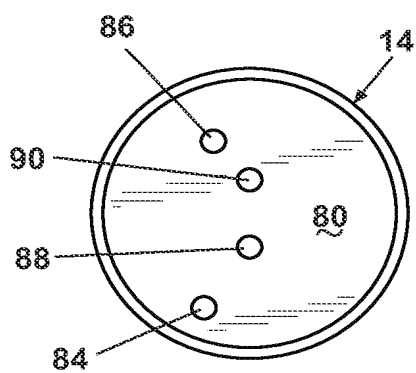


Fig. 3

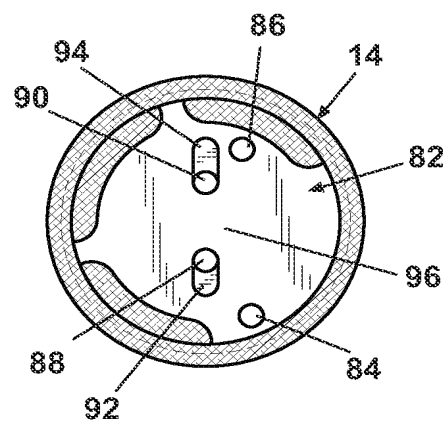
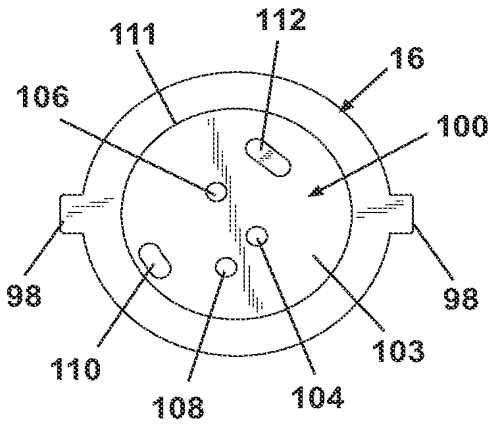
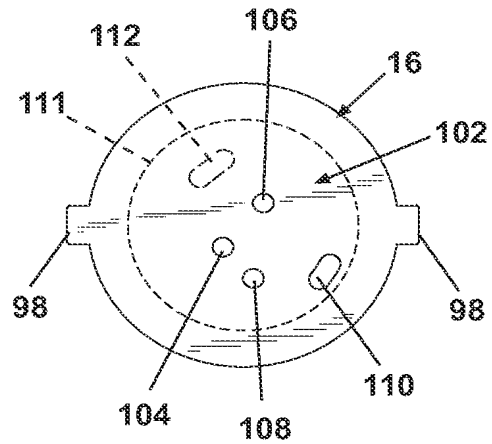


Fig. 4

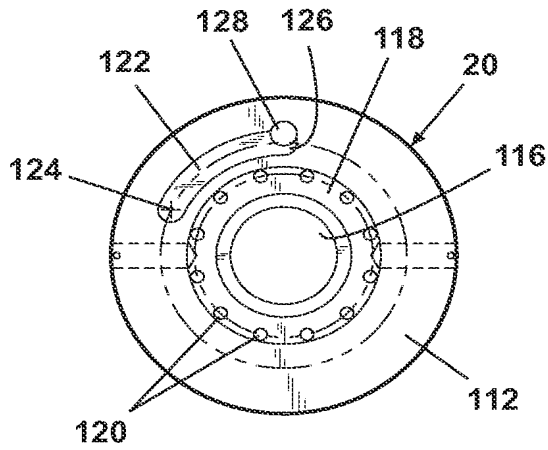
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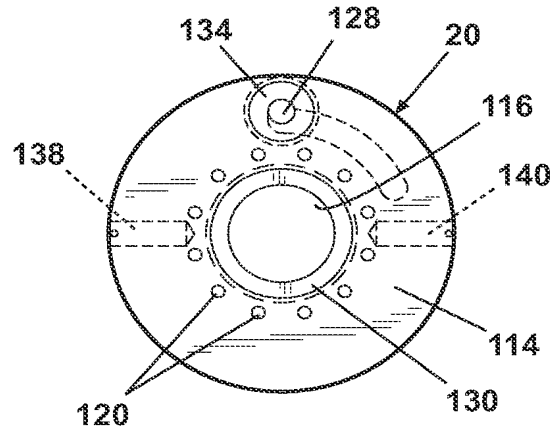
**Fig. 5**



**Fig. 6**



**Fig. 7**



**Fig. 8**

Replacement Sheet

5/13

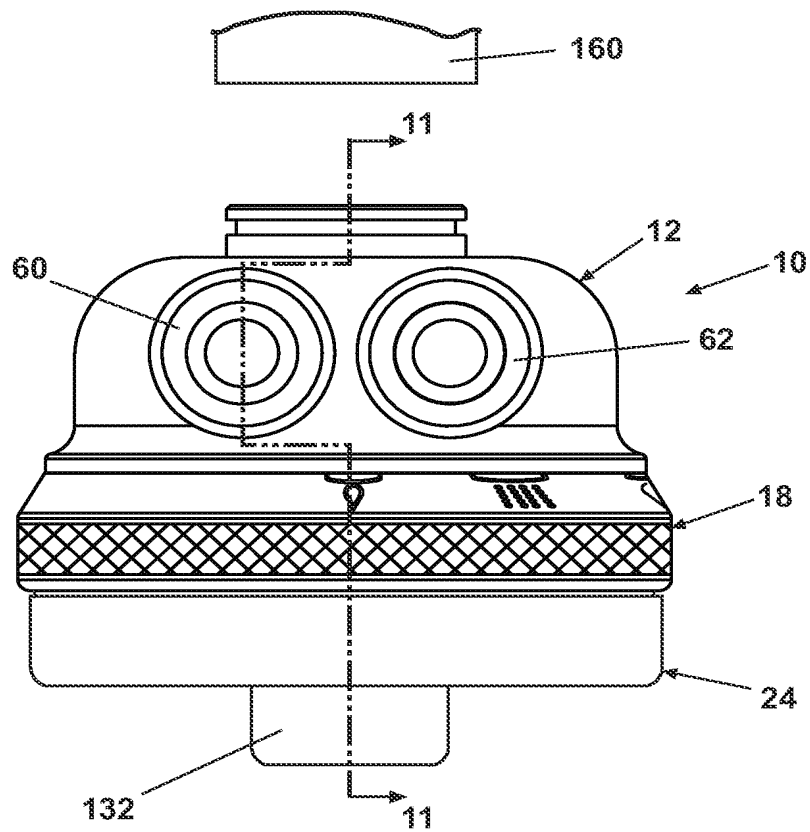
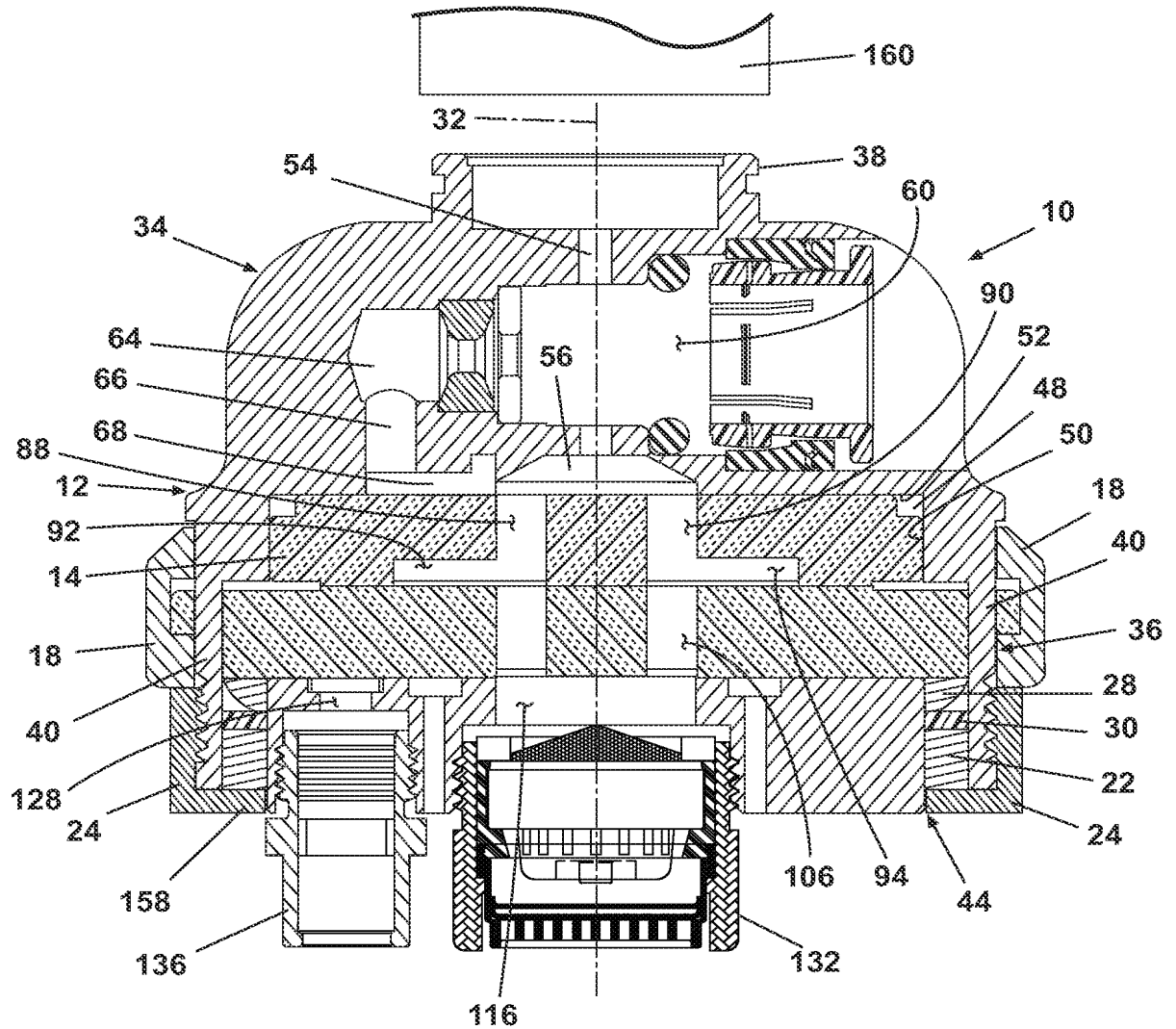


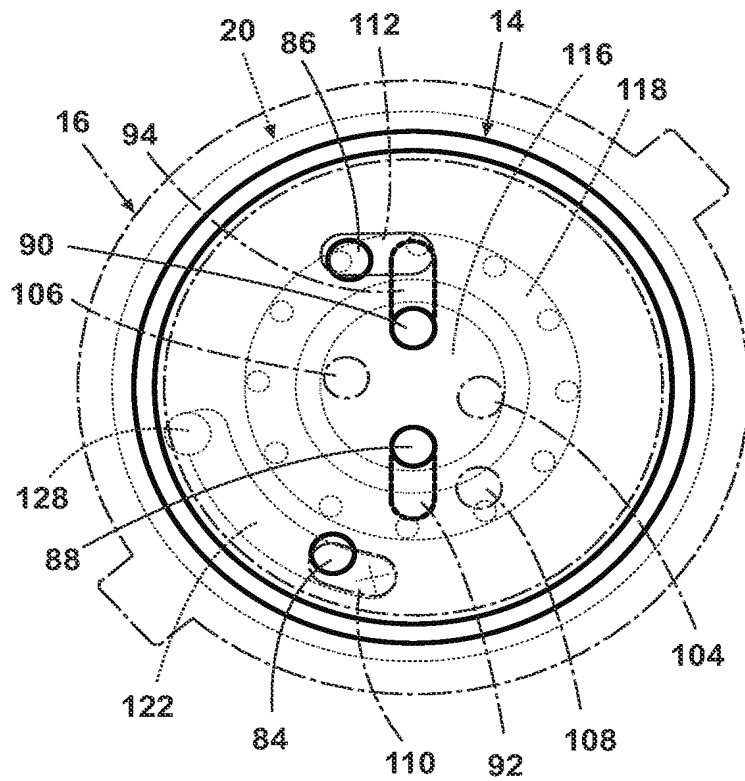
Fig. 10

Replacement Sheet  
**6/13**

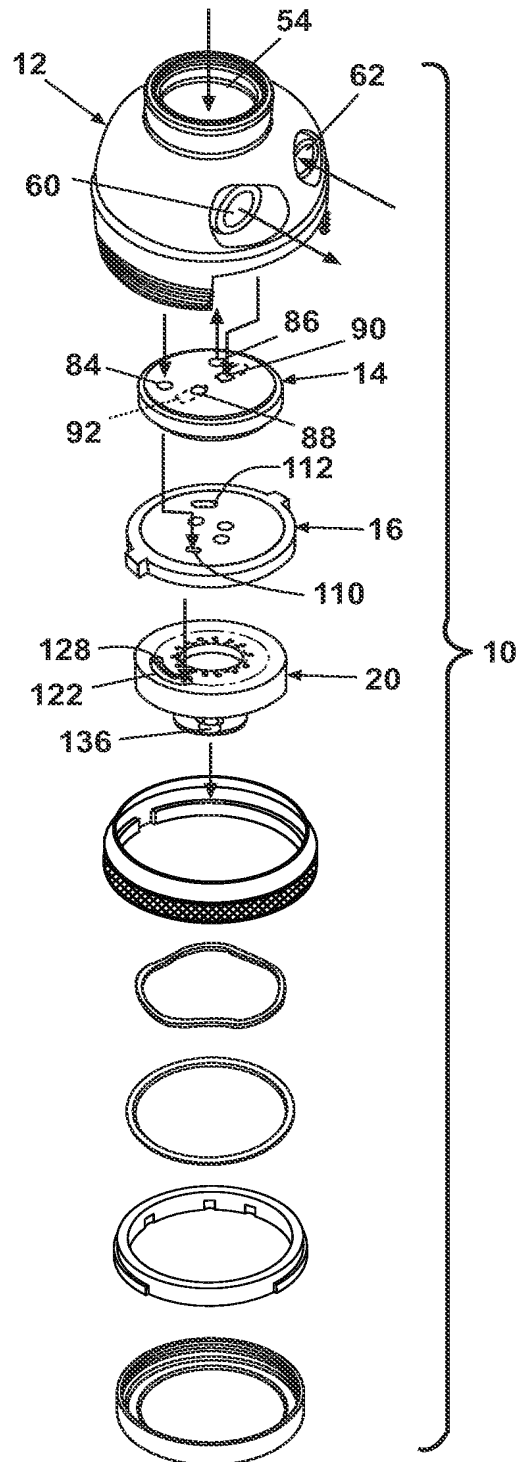


**Fig. 11**

Replacement Sheet  
**7/13**



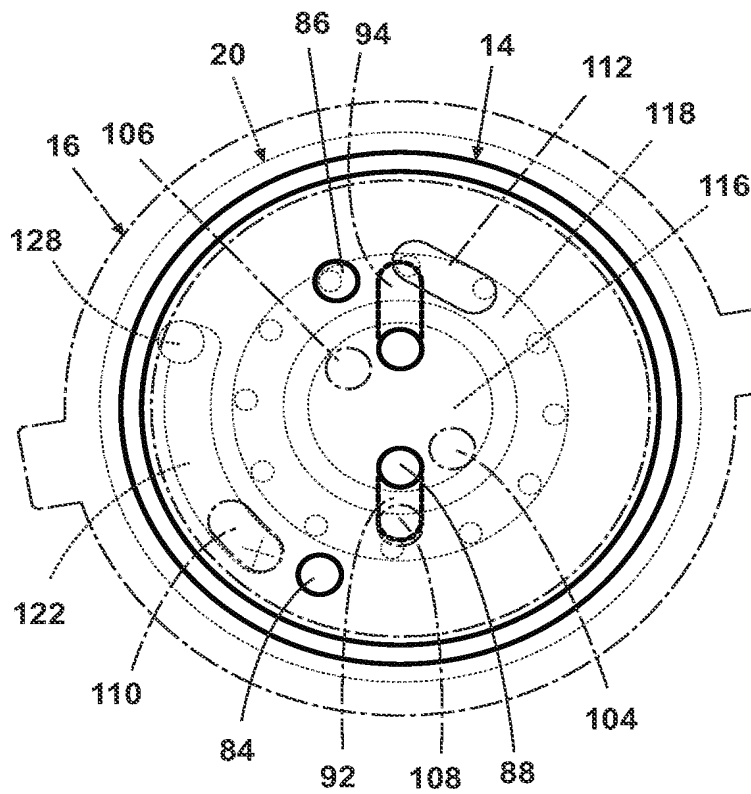
**Fig. 12**



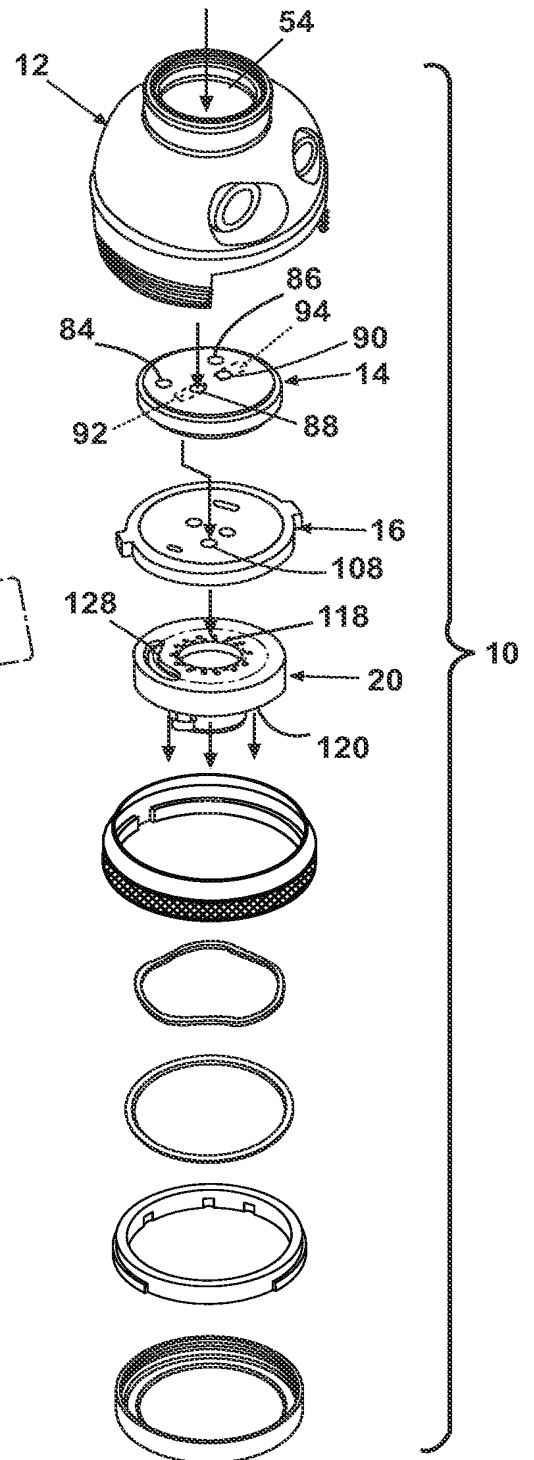
**Fig. 13**



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**8/13**

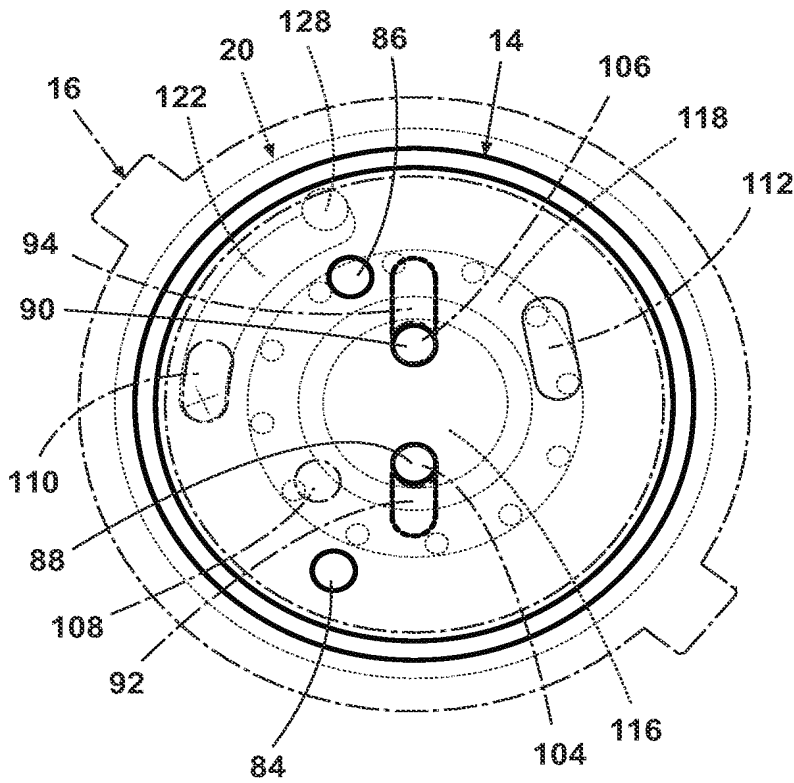


**Fig. 14**

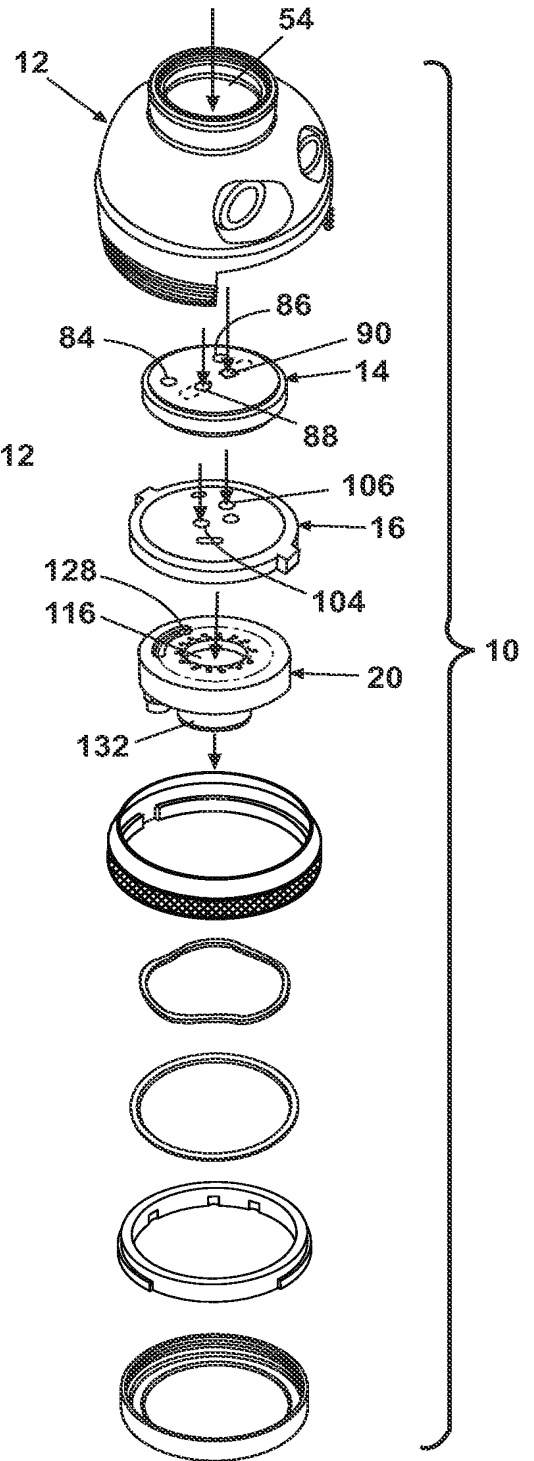


**Fig. 15**

Replacement Sheet  
**9/13**

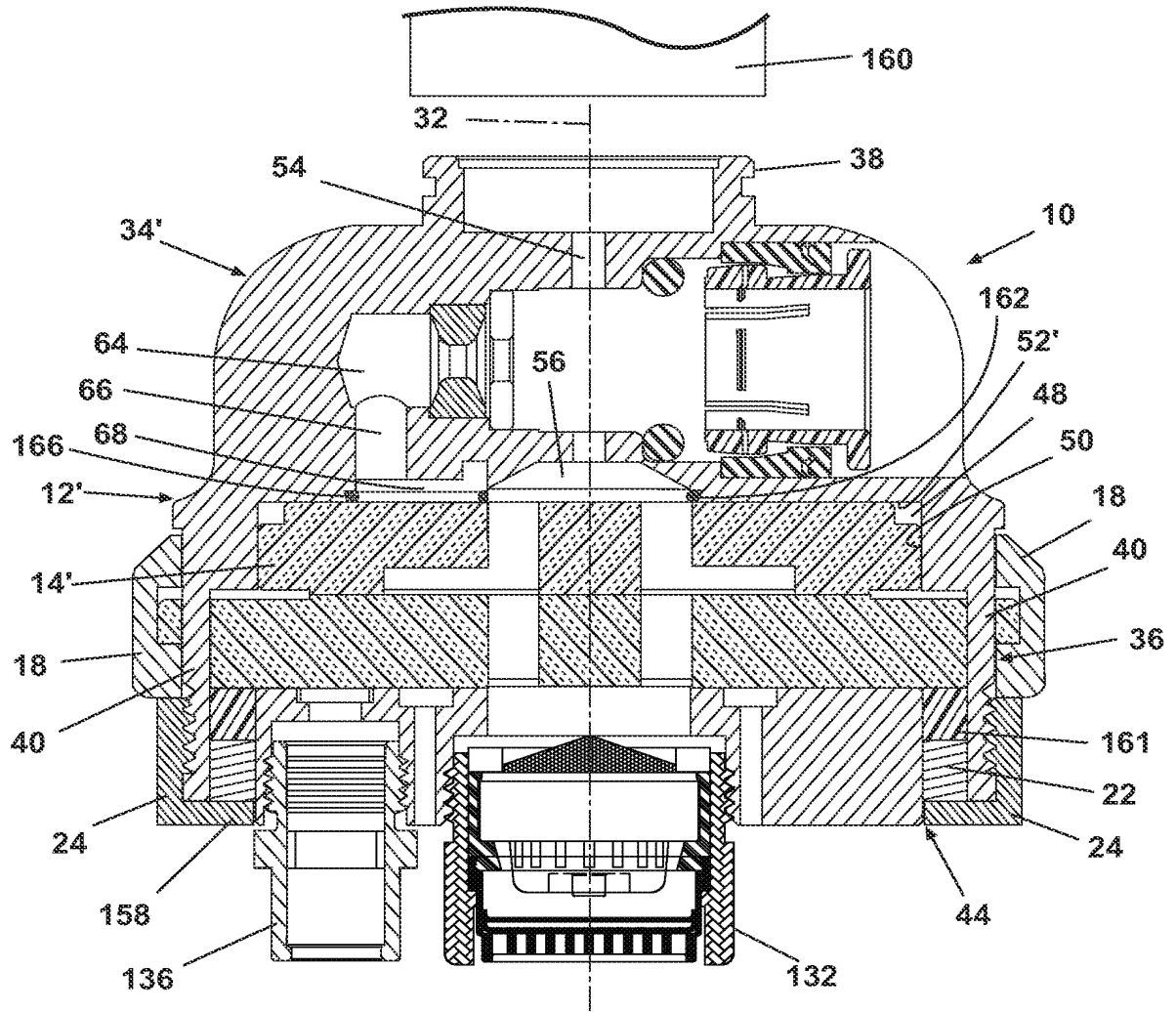


**Fig. 16**



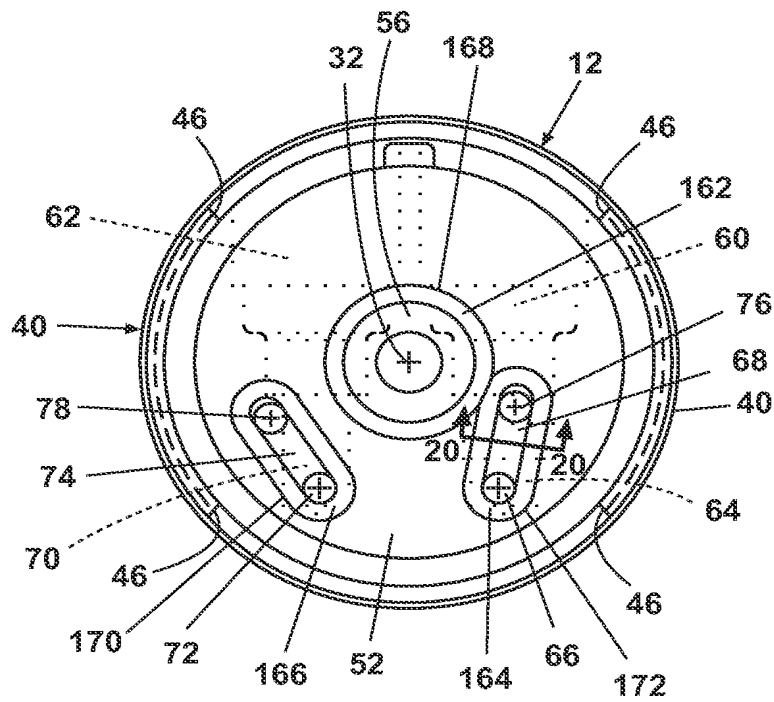
**Fig. 17**

Replacement Sheet  
**10/13**

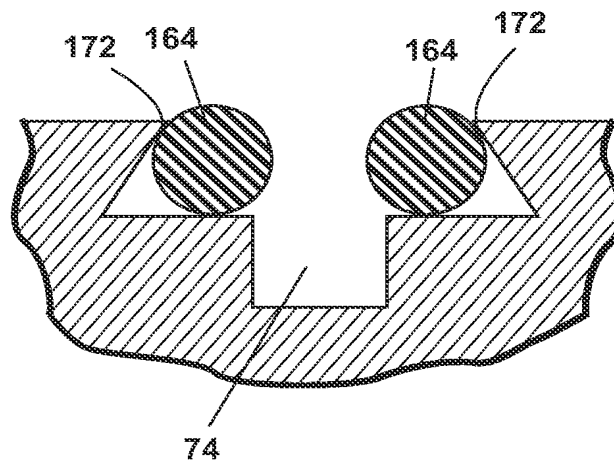


**Fig. 18**

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**11/13**

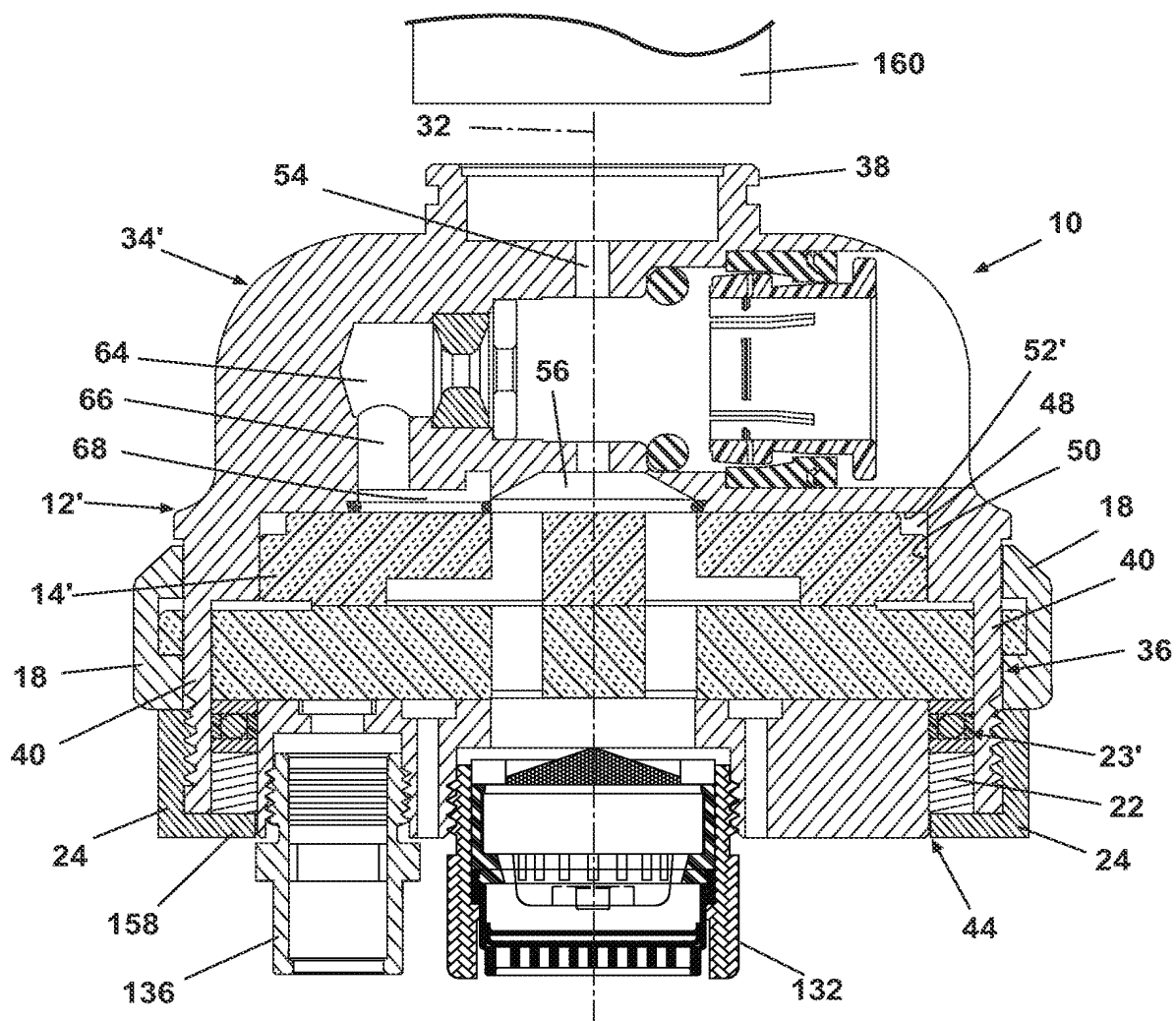


**Fig. 19**



**Fig. 20**

Replacement Sheet  
**12/13**



**Fig. 21**



# EXHIBIT D

## UNITED STATES PATENT AND TRADEMARK OFFICE

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Alexandria, Virginia 22313-1450  
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/595,281

11/22/2006

Robert S. Creswell

70038-0068

6682

20915

7590

09/10/2008

MCGARRY BAIR PC

32 Market Ave. SW

SUITE 500

GRAND RAPIDS, MI 49503

EXAMINER

FOX, JOHN C

ART UNIT

PAPER NUMBER

3753

MAIL DATE

DELIVERY MODE

09/10/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/595,281

**Applicant(s)**

CRESWELL ET AL.

**Examiner**

John Fox

**Art Unit**

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 11-13 and 15-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 5-10 is/are rejected.
- 7) ☒ Claim(s) 2-4 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

This action is responsive to the communication filed August 18, 2008.

The substitute drawings are noted with appreciation.

Claims 11-13 and 15-18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made without traverse.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Piggott (US 3,516, 611) in view of Kuran et al, of record.

It is believed that the pertinence of the Piggott reference is readily apparent. Elements 23 and 24 rotate together. Element 24 is read as an accessory case. The discs 22 and 23 are not made of ceramic. Kuran et al show a diverter valve with the two discs made of ceramic, a well known construction. It would have been obvious for one of ordinary skill in the art at the time the invention was made to have used ceramic to make the discs 22, 23 of Piggott to improve the sealing therein and under the rationale set forth in KSR v. Teleflex, 550 U.S. \_\_\_, 127 S. Ct. 1727, 82 U.S.P.Q.2d 1385 (2007) that the simple substitution of one known element for another to obtain predictable results is obvious.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Piggott in view of Kuran et al, as applied above, and further in view of Chow et al (US 4,534,512).



Piggott, as modified, shows the claimed device except for an aerated flow nozzle, which is common and shown by Chow et al, see 134 for example. It would have been obvious for one of ordinary skill in the art at the time the invention was made to have used such an aerated flow nozzle in the device of Piggott, as modified, to similarly provide aerated flow and under the rationale set forth in *KSR v. Teleflex*, 550 U.S. \_\_\_, 127 S. Ct. 1727, 82 U.S.P.Q.2d 1385 (2007) that the simple substitution of one known element for another to obtain predictable results is obvious.

Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Piggott in view of Kuran et al and further in view of d'Agostino et al (US 5,520,216).

Piggott, as modified, shows the claimed device except for pressure balancing. D'Agostino shows a rotary valve with pressure balancing of the rotor to eliminate axial forces. It would have been obvious for one of ordinary skill in the art at the time the invention was made to have similarly provided the valve of Piggott, as modified, with pressure balancing to similarly eliminate axial forces.

Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Piggott in view of Kuran et al and further in view of Acker (US 5,275,206).

Piggott, as modified, shows the claimed device except for a thrust bearing. Acker teaches a rotary valve with a thrust washer 81 and wave springs 78 for reducing friction on the rotor. It would have been obvious for one of ordinary skill in the art at the time the invention was made to have used such a thrust bearing in the valve of Piggott, as modified, to similarly reduce friction on the rotor thereof.

Claims 2-4 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Fox whose telephone number is 571-272-4912. The examiner can normally be reached on Monday-Saturday from 10am-6pm (Hoteling Program).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on 571-272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John Fox/

Application/Control Number: 10/595,281  
Art Unit: 3753

Page 5

Primary Examiner  
Art Unit 3753

<b>Notice of References Cited</b>	Application/Control No. 10/595,281		Applicant(s)/Patent Under Reexamination CRESWELL ET AL.	
	Examiner John Fox		Art Unit 3753	Page 1 of 1

#### U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-3,516,611 A	06-1970	PIGGOTT RICHARD G	239/394
*	B	US-3,814,326 A	06-1974	Bartlett, Lawrence D.	239/394
*	C	US-3,850,351 A	11-1974	Yoshihara, Tetsuya	239/393
*	D	US-4,498,611 A	02-1985	Yoshihara, Tetsuya	222/599
*	E	US-4,534,512 A	08-1985	Chow et al.	239/394
*	F	US-4,577,785 A	03-1986	Wakabayashi, Senzo	222/598
*	G	US-4,747,580 A	05-1988	Tinnes et al.	222/598
*	H	US-5,275,206 A	01-1994	Acker, Richard C.	137/625.46
*	I	US-5,520,216 A	05-1996	d'Agostino et al.	137/862
*	J	US-6,575,196 B1	06-2003	Creswell, Robert S.	137/625.46
*	K	US-7,204,271 B2	04-2007	Kasai et al.	137/625.46
*	L	US-7,314,062 B2	01-2008	Chen, Chuan-Lung	137/625.41
	M	US-			

#### FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

#### NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	4586735
<b>Application Number:</b>	10595281
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	6682
<b>Title of Invention:</b>	<div>EXHIBIT E</div> DIVERTER VALVE
<b>First Named Inventor/Applicant Name:</b>	Robert S. Creswell
<b>Customer Number:</b>	20915
<b>Filer:</b>	Joel Evan Bair
<b>Filer Authorized By:</b>	
<b>Attorney Docket Number:</b>	70038-0068
<b>Receipt Date:</b>	09-JAN-2009
<b>Filing Date:</b>	22-NOV-2006
<b>Time Stamp:</b>	15:22:41
<b>Application Type:</b>	U.S. National Stage under 35 USC 371

### Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 169
RAM confirmation Number	714
Deposit Account	502003
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. 1.492 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		G0430833.PDF	134627	yes	7
			2e8f79f9771c7740cfd5ab2ad39db55b872928f5		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Amendment/Req. Reconsideration-After Non-Final Reject		1	1	
	Claims		2	4	
	Applicant Arguments/Remarks Made in an Amendment		5	7	
Warnings:					
Information:					
2	Fee Worksheet (PTO-06)	fee-info.pdf	32036	no	2
			f807896220e9707a4167897100a4166a8af77d60		
Warnings:					
Information:					
Total Files Size (in bytes):			166663		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

## Electronic Patent Application Fee Transmittal

<b>Application Number:</b>	10595281			
<b>Filing Date:</b>	22-Nov-2006			
<b>Title of Invention:</b>	DIVERTER VALVE			
<b>First Named Inventor/Applicant Name:</b>	Robert S. Creswell			
<b>Filer:</b>	Joel Evan Bair/Rebecca Shilt			
<b>Attorney Docket Number:</b>	70038-0068			
Filed as Small Entity				
<b>U.S. National Stage under 35 USC 371 Filing Fees</b>				
<b>Description</b>	<b>Fee Code</b>	<b>Quantity</b>	<b>Amount</b>	<b>Sub-Total in USD(\$)</b>
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
Claims in excess of 20	2615	4	26	104
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
<b>Post-Allowance-and-Post-Issuance:</b>				
<b>Extension-of-Time:</b>				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension - 1 month with \$0 paid	2251	1	65	65
Miscellaneous:				
Total in USD (\$)				169



**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants: ROBERT S. CRESWELL, MICHAEL ZOLNIEREK, MICHAEL W. REGELBRUGGE, AND  
JIMMIE D. CHRYSLER

For: DIVERTER VALVE

Examiner: John C. Fox

Serial No.: 10/595,281

Filed: April 4, 2006

Docket No.: 70038-0068

Group Art Unit: 3753

CERTIFICATE OF MAILING/TRANSMISSION (37 CFR 1.8(a))	
I hereby certify that this correspondence is, on the date shown below, being:	
<input type="checkbox"/> deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to the Box PCT, Commissioner for Patents, Alexandria, VA 22313-1450.	<input checked="" type="checkbox"/> transmitted via EFS Web filing to the Patent and Trademark Office.
	<u>/Rebecca L. Shilt/</u>
	Signature
Date: <u>January 9, 2009</u>	<u>Rebecca L. Shilt</u>
	(type or print name of person certifying)

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**RESPONSE TO OFFICE ACTION**

Sir:

This paper responds to the Non-final Office Action mailed September 10, 2008.

**Amendments to the Claims** begin on page 2 of this paper.

**Remarks** begin on page 5 of this paper.

## **AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims:**

1. (Currently Amended) A diverter valve for selectively controlling the flow of fluid from a fluid source to one of at least two fluid outlets, the valve comprising:

a housing defining at least one flow passage and having an outlet for diverting fluid from the fluid source to a device, and an inlet for receiving fluid from the device;

a first ceramic plate mounted to the housing and fixed against rotation, the first ceramic plate having at least one flow passage in registry with the housing flow passage; and

a second ceramic plate rotatably mounted within the housing, the second ceramic plate having at least one flow passage that can be selectively placed into fluid communication with the housing flow passage; and the diverter valve characterized by:

an accessory case fixedly mounted to the second ceramic plate, the accessory case having at least one flow passage in registry with the at least one second ceramic plate flow passage, wherein the at least one flow passage in the accessory case is configured to mount a flow adapter,

whereby rotation of the second ceramic plate can selectively cause fluid to flow through the device, to bypass the device, and to flow through the at least one flow passage in the accessory case.

2. (Previously Presented) The diverter valve of claim 1 wherein the accessory case is adhered to the second ceramic plate.

3. (Previously Presented) The diverter valve of claim 2 wherein the accessory case is adhered to the second ceramic plate by an adhesive.

4. (Previously Presented) The diverter valve of claim 2 wherein the adhesive is epoxy.

5. (Previously Presented) The diverter valve of claim 1 wherein the accessory case mounts two flow adapters.

6. (Previously Presented) The diverter valve of claim 5 wherein one flow adapter is for aerated flow and a second flow adapter is for stream flow.

7. (Currently Amended) The diverter valve of claim 1 wherein some of the flow passages in the housing and the accessory case are configured and oriented radially to substantially balance hydraulic pressures acting on radially across the ceramic plates, whereby to minimize separation of the ceramic plates from each other.

8. (Previously Presented) The diverter valve of claim 7 wherein a flow passage in the housing is open to and parallel with the first ceramic plate whereby pressure in the flow passage can act against the first ceramic plate to urge it toward the second ceramic plate.

9. (Previously Presented) The diverter valve of claim 1 further comprising a thrust bearing and a retainer, wherein the thrust bearing is disposed between the retainer and the second ceramic plate, and bears against the second ceramic plate with reduced friction to enable the second ceramic plate to rotate with lower torque.

10. (Previously Presented) The diverter valve of claim 9 wherein the thrust bearing comprises a wave spring and washer.

11. (Previously Presented) The diverter valve of claim 9 wherein the thrust bearing comprises a low friction washer.

12. (Previously Presented) The diverter valve of claim 11 wherein the low friction washer comprises PTFE.

13. (Previously Presented) The diverter valve of claim 9 wherein the thrust bearing is a roller bearing.

14. (Previously Presented) The diverter valve of claim 1 wherein the first ceramic plate is adhered to the housing.

15. (Previously Presented) The diverter valve of claim 1 further comprising at least one ring seal between the first ceramic plate and the housing.

16. (Previously Presented) The diverter valve of claim 15 comprising three ring seals between the first ceramic plate and the housing.

17. (Previously Presented) The diverter valve of claim 15, wherein the ring seal is seated within a groove.

18. (Previously Presented) The diverter valve of claim 17 wherein the groove is a dovetail groove.

19. (New) A diverter valve for selectively controlling the flow of fluid from a fluid source to one of at least two fluid outlets, the valve comprising:

a housing defining at least one flow passage;

a first ceramic plate mounted to the housing and fixed against rotation, the first ceramic plate having at least one flow passage in registry with the housing flow passage; and

a second ceramic plate rotatably mounted within the housing, the second ceramic plate having at least one flow passage that can be selectively placed into fluid communication with the housing flow passage; and

an accessory case adhered to the second ceramic plate, the accessory case having at least one flow passage in registry with the at least one second ceramic plate flow passage, wherein the at least one flow passage in the accessory case is configured to mount a flow adapter.

20. (New) The diverter valve of claim 19 wherein the accessory case is adhered to the second ceramic plate by an adhesive.

21. (New) The diverter valve of claim 20 wherein the adhesive is epoxy.

22. (New) The diverter valve of claim 19 wherein the accessory case mounts two flow adapters.

23. (New) The diverter valve of claim 22 wherein one flow adapter is for aerated flow and a second flow adapter is for stream flow.

24. (New) The diverter valve of claim 19 wherein the first ceramic plate is adhered to the housing.

## **Remarks**

Claims 1-18 were in the application as examined. Claims 11-13 and 15-18 are considered withdrawn as being drawn to a nonelected species. By the foregoing amendments, claims 1 and 7 are amended without prejudice and new claims 19-24 are added. No new matter is added by the amendments, and further examination and consideration of claims 1-24 is respectfully requested in view of the foregoing amendment and the following remarks.

## **Rejections under §103**

Claims 1 and 5 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 3,516,611 to Piggott in view of U.S. Patent No. 5,701,934 to Kuran et al. The rejection is respectfully traversed.

Substituting the ceramic disks of Kuran et al. for the two plates 23 and 24 of Piggott, as suggested by the Examiner, would not reach the invention. Claim 1 as amended requires an inlet and an outlet for connecting to another device. Both Piggott and Kuran disclose valves with multiple flow outlets only. Applicant's invention is a diverter that diverts fluid flow through an outlet to another device and recaptures that flow through a second inlet for further flow through the diverter. Consequently, the flow passages through the inventive valve are more complex than a simple nozzle. Piggott discloses four nozzle tips 29 as different outlets and Kuran discloses two outlets 30 and 72. Neither discloses a second inlet. Moreover, neither Piggott nor Kuran disclose structure that enables one to selectively cause fluid to flow through the device, to bypass the device, and to flow through the flow passages in the accessory case. Claim 1 is thus distinguishable from the alleged combination and therefore patentable. And because claim 5 depends from claim 1, it is patentable for the same reasons.

Claim 6 stands rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 3,516,611 to Piggott in view of U.S. Patent No. 5,701,934 to Kuran et al., and further in view of U.S. Patent No. 4,534,512 to Chow et al. The rejection is respectfully traversed.

Claim 6 depends indirectly from claim 1 and is therefore patentable for the same reasons that claim 1 is patentable. Chow et al. discloses nothing more relevant to the invention than is

already disclosed in Piggott and Kuran. Chow is cited for its disclosure of an aerated flow nozzle, a feature already disclosed at 72 in Kuran. Chow is nothing more than a nozzle for adjusting outlet flow through multiple outlets, similar to Piggott and Kuran that show outlet flow through different outlets. Nothing in the cited references suggests a diverter valve of the invention that includes a second inlet with its more complex internal flow structure.

Claims 7-8 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 3,516,611 to Piggott in view of U.S. Patent No. 5,701,934 to Kuran et al., and further in view of U.S. Patent No. 5,520,216 to d'Agostino et al. The rejection is respectfully traversed.

Claims 7 and 8 depend directly or indirectly from claim 1 and are therefore patentable for the same reasons as claim 1. The structure disclosed in d'Agostino balances the forces acting axially on the rotary valve member. (Col. 4, ll. 16-20) In contrast, claim 7 requires that some of the flow passages in the housing and the accessory case be configured and oriented radially to substantially balance hydraulic pressures radially across the ceramic plates. Nothing in d'Agostino is concerned about radial balancing because there are not two discs to keep for separating and causing leakage. Because the elements of claim 7 are not found in the alleged combination, claim 7 is patentable over the cited art. And because claim 8 depends from claim 7, it is likewise patentable for the same reasons. Moreover, claim 8 requires a flow passage open to and parallel to the first ceramic plate, a feature not disclosed or suggested by d'Agostino. Claim 8 is therefore also patentable.

Claims 9 and 10 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 3,516,611 to Piggott in view of U.S. Patent No. 5,701,934 to Kuran et al., and further in view of U.S. Patent No. 5,275,206 to Acker. The rejection is respectfully traversed.

Claims 9 and 10 depend directly or indirectly from claim 1 and are therefore patentable for the same reasons as claim 1. Acker adds nothing to show the type of diverter claimed.

### **Objections**

Claim 2-5 and 14 are objected to as being dependant upon a rejected base claim but otherwise allowable. While Applicants acknowledge with thanks the Examiner's determination of allowability, it is believed that claims 2-4 and 14 are allowable without further amendment in view of the foregoing remarks.

Moreover, since claim 1 is a generic claim that is believed to be patentable over the art of record, and claims 11-13 and 15-18 depend from claim, further consideration of the withdrawn claims is respectfully requested.

In addition, Applicants have added new claims 19-24 which are, in effect, claims 2-5 and 14 rewritten into patentable form.

### **Conclusion**

For the reasons discussed above, claims 1-24 are allowable over the prior art. If there are any remaining issues which the Examiner believes may be resolved in an interview, the Examiner is respectfully invited to contact the undersigned. Early notification of the allowability is respectfully requested. Any questions concerning the foregoing can be directed to the undersigned.

Respectfully submitted,

ROBERT S. CRESWELL ET AL.

Date: January 9, 2009

By:           /Joel E Bair/          

Joel E. Bair, Reg. No. 33,356  
McGARRY BAIR PC  
32 Market Ave. SW, Suite 500  
Grand Rapids, Michigan 49503  
616-742-3500  
[jeb@mcgarrybair.com](mailto:jeb@mcgarrybair.com)

# EXHIBIT F



## UNITED STATES PATENT AND TRADEMARK OFFICE

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### NOTICE OF ALLOWANCE AND FEE(S) DUE

20915 7590 03/18/2009

MCGARRY BAIR PC  
32 Market Ave. SW  
SUITE 500  
GRAND RAPIDS, MI 49503

EXAMINER

FOX, JOHN C

ART UNIT

PAPER NUMBER

3753

DATE MAILED: 03/18/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/595,281

11/22/2006

Robert S. Creswell

70038-0068

6682

TITLE OF INVENTION: DIVERTER VALVE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$755	\$300	\$0	\$1055	06/18/2009

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.**

**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.**

#### HOW TO REPLY TO THIS NOTICE:

##### I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

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B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**



# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
or Fax (571)-273-2885**

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

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Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

20915 7590 03/18/2009

**MCGARRY BAIR PC**  
32 Market Ave. SW  
SUITE 500  
GRAND RAPIDS, MI 49503

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,281	11/22/2006	Robert S. Creswell	70038-0068	6682

TITLE OF INVENTION: DIVERTER VALVE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$755	\$300	\$0	\$1055	06/18/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
FOX, JOHN C	3753	137-625460

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 \_\_\_\_\_
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 \_\_\_\_\_
- 3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_

Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_

Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,281	11/22/2006	Robert S. Creswell	70038-0068	6682
20915	7590	03/18/2009	EXAMINER	
MCGARRY BAIR PC 32 Market Ave. SW SUITE 500 GRAND RAPIDS, MI 49503			FOX, JOHN C	
			ART UNIT	PAPER NUMBER
			3753	
DATE MAILED: 03/18/2009				

## Determination of Patent Term Extension under 35 U.S.C. 154 (b)

(application filed after June 7, 1995 but prior to May 29, 2000)

The Patent Term Extension is 0 day(s). Any patent to issue from the above-identified application will include an indication of the 0 day extension on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Extension is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/595,281	CRESWELL ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	John Fox	3753	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment of January 9, 2009.
2. ☒ The allowed claim(s) is/are 19-24.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_.

**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application                     |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date ____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date ____     | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance             |
|  | 9. <input type="checkbox"/> Other ____.   |

/John Fox/  
Primary Examiner  
Art Unit: 3753

This Action is responsive to the communication filed January 9, 2009.

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-18, drawn to a bypass valve, classified in class 137, subclass 625.29.
- II. Claims 19-24, drawn to a diverter valve, classified in class 137, subclass 625.46.

Inventions I and II are directed to related combinations. The related inventions are distinct if: (1) the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect; (2) the inventions do not overlap in scope, i.e., are mutually exclusive; and (3) the inventions as claimed are not obvious variants. See MPEP § 806.05(j). In the instant case, the inventions as claimed are not capable of use together and can have a materially different mode of operation, function, or effect. Furthermore, the inventions as claimed do not encompass overlapping subject matter and there is nothing of record to show them to be obvious variants.

Amended claims 1-18 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: see above.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 1-18 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Art Unit: 3753

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Cancel claims 1-18.

This application is in condition for allowance except for the presence of claims 1-18 directed to an invention non-elected without traverse. Accordingly, claims 1-18 have been cancelled.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Fox whose telephone number is 571-272-4912. The examiner can normally be reached on Monday-Saturday from 10am-6pm (Hoteling Program).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on 571-272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3753

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John Fox/  
Primary Examiner  
Art Unit 3753




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## BIB DATA SHEET

CONFIRMATION NO. 6682


SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.	
10/595,281	11/22/2006	137	3753	70038-0068	
<b>RULE</b>					
<b>APPLICANTS</b> Robert S. Creswell, Grand Rapids, MI; Michael Zolnierrek, Grandville, MI; Michael W. Regelbrugge, Rockford, MI; Jimmie D. Chrysler, Wyoming, MI;					
<b>** CONTINUING DATA *****</b> This application is a 371 of PCT/US04/33436 10/08/2004 which claims benefit of 60/481,499 10/10/2003 and claims benefit of 60/481,890 01/13/2004 * (*)Data provided by applicant is not consistent with PTO records.					
<b>** FOREIGN APPLICATIONS *****</b>					
<b>** IF REQUIRED, FOREIGN FILING LICENSE GRANTED *** SMALL ENTITY **</b> 05/24/2007					
Foreign Priority claimed <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 35 USC 119(a-d) conditions met <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Verified and /JOHN C FOX/ Acknowledged Examiner's Signature	<input type="checkbox"/> Met after Allowance Initials	<b>STATE OR COUNTRY</b> MI	<b>SHEETS DRAWINGS</b> 13	<b>TOTAL CLAIMS</b> 18	<b>INDEPENDENT CLAIMS</b> 1
<b>ADDRESS</b> MCGARRY BAIR PC 32 Market Ave. SW SUITE 500 GRAND RAPIDS, MI 49503 UNITED STATES					
<b>TITLE</b> DIVERTER VALVE					
<b>FILING FEE RECEIVED</b> 619	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:			<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit	

<b><i>Issue Classification</i></b>  	<b>Application/Control No.</b>  10595281	<b>Applicant(s)/Patent Under Reexamination</b>  CRESWELL ET AL.
	<b>Examiner</b>  John Fox	<b>Art Unit</b>  3753

[illegible][illegible]

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	6	
/John Fox/ Primary Examiner.Art Unit 3753	3/2009	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	11



<b>Search Notes</b>  	<b>Application/Control No.</b>  10595281	<b>Applicant(s)/Patent Under Reexamination</b>  CRESWELL ET AL.
	<b>Examiner</b>  John Fox	<b>Art Unit</b>  3753

SEARCHED			
Class	Subclass	Date	Examiner
137	625.17		
	625.4		
	625.46		
	625.47		
	801		
	862		
239	25		
	391		
	394	3/2009	/JF/

SEARCH NOTES		
Search Notes	Date	Examiner
BRS search		
inventor name search	3/2009	/JF/

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner
137	625.46		
	801		
239	394	3/2009	/JF/

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EXHIBIT G
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10/595,281 DIVERTER VALVE

03-19-  
2009:15:44:33**Patent Term Extensions**

Patent Term Extension (PTE) for Application Number: 10/595,281

Explanation Of Calculations

Filing or 371(c) Date:	11-22-2006	USPTO Delay (PTO) Delay (days):	0
USPTO Adjustment (days):	+0	Corrections (APPL) Delay (days):	0
		Total PTE (days):	0

**Patent Term Extension History**

Date	Contents Description	PTO(Days)	APPL(Days)
03-18-2009	Mail Notice of Allowance		
03-13-2009	Document Verification		
03-15-2009	Notice of Allowance Data Verification Completed		
02-21-2009	Date Forwarded to Examiner		
01-09-2009	Response after Non-Final Action		
01-09-2009	Request for Extension of Time - Granted		
09-10-2008	Mail Non-Final Rejection		
09-09-2008	Non-Final Rejection		
08-20-2008	Date Forwarded to Examiner		
08-18-2008	Response to Election / Restriction Filed		
08-18-2008	New or Additional Drawing Filed		
07-17-2008	Mail Restriction Requirement		
07-17-2008	Requirement for Restriction / Election		
12-22-2007	Case Docketed to Examiner in GAU		
09-21-2007	IFW TSS Processing by Tech Center Complete		
08-30-2007	PG-Pub Issue Notification		
06-03-2007	Application Dispatched from OIPE		
11-22-2006	371 Completion Date		
05-29-2007	Sent to Classification Contractor		
05-29-2007	Notice of DO/EO Acceptance Mailed		
11-22-2006	Additional Application Filing Fees		
11-22-2006	A statement by one or more inventors satisfying the requirement under 35 USC 115, Oath of the Applic		
07-18-2007	Dummy Standard Action - DO Not DELETE		

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